

Why should wild nature be preserved?
A dialogue between Biblical Theology and Biodiversity
Conservation.

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This dissertation is submitted for the degree of Doctor of Philosophy

DECLARATION

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text. It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the relevant Degree Committee.

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SUMMARY & ABSTRACT

The past century has seen a rapid acceleration in global anthropogenic biodiversity loss, despite massively increased conservation effort and knowledge. Consequently, there are wide-ranging debates around whether economic and instrumental valuations of wild nature assist in its preservation, or whether they commodify entities that possess intrinsic or inherent value.

This thesis seeks to bring insights from biblical theology into dialogue with conservation biology concerning the value of wild nature and the place of humanity in relation to it. Through a theological overview of four major biblical themes expressing God's initiative towards all that exists (creation, covenant, reconciliation in Christ, and eschatological consummation), it is proposed that God's relationship with nonhuman creation provides a useful conceptual structure in addressing contemporary conservation dilemmas. In particular, it is suggested that debates regarding anthropocentric or ecocentric, and instrumental (including economic) or intrinsic valuations of wild nature, and similarly between 'conservation' and 'preservation', may constructively be placed within a wider context regarding humanity's place with regard to its fellow creatures. Within a Christian worldview it is proposed that this is ultimately a Theo-ecocentric context wherein all value, nonhuman and human, is contingent upon God's purposes from creation to consummation.

The conclusion of the thesis brings the theological insights of the four central chapters into dialogue again with contemporary conservation debates. Moving beyond ecocentric (nature for itself) and anthropocentric (nature for people) motivations for conserving wild nature, it proposes a concept of 'people within nature' that is theologically coherent but expressed in language that brings biblical theology into debate both with secular conservationists and those of other faith traditions. It recognises both humanity's total dependence on thriving ecosystems and the particular role humans play in nature's protection. The language of virtue ethics is posited as being particularly valuable in this regard. It is hoped that this thesis will be a useful contribution to current conservation debates surrounding how nature should be valued, and will also encourage deeper theological reflection on the place and value of nonhuman animals.

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CHAPTER 1

INTRODUCTION: WHY SHOULD WILD NATURE BE PRESERVED?

The twenty-first century CE has brought ecological challenges unprecedented in humanity's history. Inevitably, these issues were unfamiliar to the authors of biblical texts. Such a situation presents an immediate challenge to a theological response in terms of relating a corpus of ancient biblical texts overlaid with centuries of subsequent interpretation to a fresh context and a largely new set of questions.

Amongst multiple current environmental challenges, the crisis of anthropogenic biodiversity loss has been identified as amongst the most severe, both in terms of the extent to which humanity is exceeding 'planetary boundaries', and in the consequent impact on biodiversity and human well-being [Rockström et al. 2009; Steffen et al. 2015]. Whilst incomplete knowledge hinders accurate estimates, it has been suggested that a current extinction rate of 1,000 times the underlying average may even be an underestimate [Pimm et al. 2014].

Whilst the twentieth century CE saw the rise of the global conservation movement, it also witnessed a significant decline in biodiversity across most taxa and ecosystems [Adams 2004, 231]. According to the 2016 *Living Planet Report*, there has been a 58% decline in vertebrate species populations since 1970 [WWF 2016, 6]. The decline is uneven geographically and across ecosystems, with tropical ecosystems and freshwater species declining fastest.

Despite substantial growth in conservation science, improvements in legislation, the creation of numerous nature reserves and protected areas, and significant popular engagement and media interest, scientific assessments have repeatedly concluded that, notwithstanding local success stories, global extinction rates have increased, key habitats have been lost or degraded [Hoekstra et al. 2005], and the prospects for conserving 'wild nature' are now worse than a century ago. As one leading scientist has stated, "The sober fact is that after ten decades of effort, a whole century of achievement, the threats to nature are not reduced, but redoubled" [Adams 2004 228].

The reasons for nature's decline are not hard to find. A 1997 *Science* article declared, "We live on a human-dominated planet and the momentum of human population growth, together with the imperative for further economic development in most of the world, ensures that our dominance will increase" [Vitousek 1997a, 499]. More recently a paper in *Nature* reported that

40+% of earth's land surface is urban or agricultural land. Human impact is such that the paper was entitled, *Approaching a state shift in Earth's biosphere* [Barnosky 2012].

The scientific consensus is that humanity's global environmental impact "has now become so significant that it rivals some of the great forces of Nature in its impact on the functioning of the Earth System" [Steffen et al. 2011, 842]. Consequently, there are growing calls formally to recognise a new geological era, the 'Anthropocene' [Cruetzen and Stoermer 2000]. Human behaviour has affected the climate at least since the deforestation accompanying the advent of Neolithic agriculture [Ruddiman 2005; Ophuls 1997, 96]. However, most recent studies date the Anthropocene as a global phenomenon to the start of the industrial revolution [Steffen et al. 2011a, b; Northcott 2013, 48]. The combination of rapid population growth, industrialisation, the exploitation of fossil fuels, and the increase of consumer culture have brought many economic and some social benefits, but at severe environmental costs.

The task of this thesis

In an era of multiple environmental threats, biodiversity loss provides unique ethical challenges in terms of the impact of one species upon all other species. Despite this, biodiversity conservation has remained a largely marginal concern within the writings of many eco-theologians [Sittler 1970; Hessel and Ruether 2000; Habel and Balabanski 2002, et al.]. In addition, voices within the environmental and conservation movements have frequently seen Christianity as deeply complicit in an anthropocentric worldview which marginalises and instrumentalises non-human species and ecosystems [White 1967; Orr 2005]. It is even alleged that the Bible is a damaging and negative text in terms of its potential for assisting in biodiversity conservation [Nash 2009].

In this context, the task of the present thesis is threefold. Firstly, it is to analyse contemporary debates within the fields of conservation biology and environmental ethics in order to articulate key questions which may be brought into dialogue with the Christian Bible. Secondly, an ecological re-reading of the Christian scriptures in the light of biodiversity loss will be attempted through textual and contextual analysis of biblical material, leading to a retrieval of understandings concealed by anthropocentric readings. Thirdly, completing the hermeneutical circle, such ecological biblical insights as are discerned will be related back to contemporary conservation dilemmas, with suggested implications for further work within both the theological and conservation fields.

This opening chapter will begin by defining key terms, leading into a review of current debates in conservation biology, identifying questions that this thesis will focus upon. Next, a theological methodology will be described allowing ancient texts to speak coherently and pertinently to contemporary conservation issues, and a brief summary will be given of the areas of theological debate and controversy to be navigated in subsequent chapters. These theological chapters comprise the heart of the thesis and address the second task described above, namely bringing conservation and biblical theology into fruitful dialogue. The final section of the thesis will identify areas for further work and seek pointers towards constructive engagement between conservation biology, Christian theology, and other worldviews. It is recognised that this is an ambitious task, to which the contribution of this thesis can only be modest, but the issues at stake are so pressing and the need for better cross-disciplinary dialogue so urgent, that this thesis is offered in the hope that it may stimulate deeper reflection and subsequent joint action.

Defining terms

Biodiversity

One of the key terms within contemporary conservation is ‘biodiversity’. Whilst this thesis generally uses ‘wild nature’, the prevalence of ‘biodiversity’ in conservation literature necessitates explaining how it will be used. First used in print in 1988 as a contraction of ‘biological diversity’ [Wilson (ed.) 1988], biodiversity is now assessed as having at least twelve distinct definitions [Gaston, in Sutherland 1998, 1-19]. It is popularly used to refer to the totality of distinct living species, but this overlooks significant academic debate around the definition and usefulness of the species concept [Futuyama 1998, 447-479; Hey 2001; Hey et al. 2003]. Many scientists also include genetic variety within species as part of biodiversity [Maier 2013, 71-130]. Additionally, species form part of complex ecological networks (ecosystems) wherein they depend both on other species and on abiotic chemical and physical processes such as water and nutrient cycles, so these are also included in some definitions. To complicate matters further, in recognition that some species may occupy a more vital niche within ecosystems than others, there has been an increasing use of ‘functional biodiversity’ in reference to ecological roles [Tilman 2001, 109-120].

The Convention on Biological Diversity (CBD) gives probably the most widely accepted definition of biodiversity as, “the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they

are part, thus embracing the diversity within species, between species and of ecosystems” [CBD 2010]. Taking this definition, biodiversity will be used in this thesis in its broadest sense as ‘the variety of life’ except where otherwise qualified (e.g. as ‘species diversity’).

Wild Nature

This thesis uses the term ‘wild nature’ because the debate about nature’s value is historically longer and ideologically broader than the modern term ‘biodiversity’ would suggest. However, ‘wild nature’ should not be interpreted as synonymous with ‘wilderness’, meaning pristine nature untouched by human agency [Maier 2013, 113-115]. Wilderness (and the associated North American ‘wilderness movement’) tends toward romantic conceptions of nature as separate from humanity, whereas human activity may deliberately or accidentally increase biodiversity [Sarkar 1999], whilst ‘letting be’ will not inevitably result in greater biodiversity or ecosystem health [Maier 2013, 114].

‘Wild nature’ will be used to refer to those aspects of the natural world either beyond humanity’s immediate control, or managed in order to maximise biological diversity. It does not encompass, except *in passim*, debates about the place of domesticated and farmed animals, or issues concerning animals in laboratories and zoos [Maier 2013, 114], where there has been considerably more theological reflection, but focusses on the place and value of creatures and ecosystems outside everyday human control whilst inevitably affected by human activities. To give an ornithological example, a student of peregrine falcons (*Falco peregrinus*) interested purely in wilderness would focus on populations in uninhabited locations, and an animal behaviourist might study birds in captivity as well as in wild habitats, whereas a focus on wild nature would encompass all wild birds including the increasing populations of urban peregrines. Wild nature is thus used as an inclusive term, neither precisely scientific nor vaguely romantic, but descriptive of nature living on its own terms, sometimes in close proximity to humanity and sometimes more independently.

Ecosystem Services

The concept of ‘ecosystem services’ (ES) is another important contemporary concept at the heart of the conservation dilemmas this thesis explores. Coined in the 1970s [Bormann 1976, 754-760], the importance of ES in conservation has grown to the extent that: “Ecosystem services have now become the central metaphor within which to express humanity’s need for the rest of living nature” [Redford and Adams 2009, 785]. One widely-used definition states

that ES are, “the conditions and processes through which natural ecosystems and the species that make them up, sustain and fulfil human life” [Chee 2004, based on Daily,1997]. ES are thus those ways in which nature contributes to human flourishing. The term is consciously anthropocentric, in that ecosystems are assessed according to the services they provide specifically for human well-being, and also polemical in that its origins stem from conservationists’ desire to persuade policy-makers of the importance of protecting nature. The value judgments and methodologies inherent in the ecosystem services concept are at the heart of the issues this thesis seeks to address, and will be returned to.

Anthropocentrism / Theocentrism / Ecocentrism

These three related terms, and variations upon them, are fundamental in describing humanity’s relationship with wild nature. However, they need careful elucidation, both here and revisited later in this thesis. *Anthropocentrism* is defined as “the view or belief that humanity is the central or most important element of existence” [Oxford English Dictionary 1989], but in practice it covers a wide spectrum of attitudes. At one extreme lies *anthropomonism*, the belief that “the only environment that counts is that of the divine-human relationship” [Watson 2010, 129]. Thus, the place of wild nature is always exclusively to serve human interests, a form of *extreme teleological anthropocentrism* [Clough 2012, xvi-xx]. This takes secular form in the belief that humans, as the most highly-evolved species in an amoral universe, may exploit the rest of nature entirely for their own ends. However, it can also be rooted in a theocentric belief that God has created the earth and its creatures entirely for human enjoyment and utility. In practice, even extreme teleological anthropocentrism can affirm caring for nature as vital for continued human wellbeing, leading to environmental ethics based on *prudential* or *enlightened anthropocentrism* [Grey 1998, 100].

A form of *mild teleological anthropocentrism*, stopping short of anthropomonism, is the belief that human interests are primary and those of animals secondary, peripheral or derivative. For instance, Ryan McLaughlin argues that Aquinas’ conflation of Christian theology and Aristotelian hierarchy means his “cosmological theocentrism actually reinforces his ethical anthropocentrism” [McLaughlin, 2014, 93]. Yet, as this thesis will explore, teleological anthropocentrism is not the only potential outcome from examining biblical texts, and a theocentric view may envisage all of God’s creatures, human and nonhuman, as possessing independent value and purpose. In such a theocentric view, humanity may nevertheless be seen as vital agents within God’s wider redemptive purposes leading to what McLaughlin calls a *functional anthropocentrism* [McLaughlin 2014, 59-60]. Such an approach is very close to an

ecocentric worldview, since humanity's functional importance serves an end which potentially encompasses the wellbeing of all creatures.

At one level, the Christian Bible, like any human writing, represents an inevitable *perspectival* or *epistemic anthropocentrism* [Attfield 2006, 91], since it was written for human readers by human authors embedded in particular personalities and cultures. Yet, historic Christian theology conventionally asserts that God's word may be discerned in and through the limitations of the Bible's human authors, and thus we will seek places where the text rises above the gravitational pull of perspectival anthropocentrism. It is proposed here that a far greater problem has been the *exegetical anthropocentrism* of much biblical interpretation, distorting biblical perspectives through cultural lenses that are alien to the biblical authors, frequently assuming that only human interests matter to God and overlooking ecocentric implications within the text. Similarly, the unavoidable *epistemological anthropocentrism* that limits human knowledge to an understanding of God's relationship with humanity (including God-given human responsibility to other creatures) does not preclude God relating independently to other creatures, and we will discern intimations of this within biblical texts.

Having explored anthropocentrism in detail, it is necessary to comment more briefly on both theocentrism and ecocentrism. Theocentrism is defined here as the belief that the purpose and value of all creation, human and nonhuman, is found primarily in God. The difficulty this leaves, as described above, is that God may ordain a hierarchy of value within nature, meaning theocentrism can lead to either anthropocentric or ecocentric orientations. For this reason, McLaughlin rejects theocentrism in favour of *cosmocentrism*, but his definition ("all created things, living and not, have value in themselves because God intends them to have such value" [McLaughlin 2014, 65]) is no better. This thesis instead proposes two new terms, *theo-anthropo-centrism* and *theo-eco-centrism* to delineate fundamental teleological distinctions within a theocentric worldview.

Ecocentrism is used here to mean a worldview that sees the whole of nature (God's creation) as of value in its entirety, without any need for human valuation of it. An alternative term, *biocentrism*, usually imputes the locus of value to individual creatures and excludes abiotic aspects of ecosystems. Whilst ecocentrism is used in preference to biocentrism, the debate about the relative value of individual creatures and ecosystems as a whole will be considered as one of the major questions this thesis addresses.

Historical context: conservation, preservation and Christianity

The historical roots of the modern nature conservation movement are complex, interwoven and contested. They include the Renaissance interest in herbaria and physic gardens [Allen 2001], from which sprang the first field-based natural history [Thomas 1983, 27], the growth of ‘scientific forestry’ originally from Prussia and thence throughout the British Empire as it sought to manage its vast lands [Barton 2002], the creation of parks and refuges for game hunting by “a patrician elite network” of nineteenth century Imperialists [Adams 2004, 12], the growth of leisure and the influence of Romanticism amongst the British middle classes [Bate 1991], and the growing realisation in North America that apparently boundless natural resources were in fact declining fast.

American understandings of wilderness changed dramatically from the Mayflower settler William Bradford, who in 1620 declared America: “A hideous and desolate wilderness full of wilde beasts and wilde men” [Marx 1964, 41], through a period of enormous exploitation of wild nature [Brown 2005, 3], to the rapid decline in buffalo and other species. The example of the passenger pigeon is salutary: in 1813, ornithologist James Audubon reported a flock 55 miles long, containing over a billion birds [Audubon, 1835, 319-327], yet by 1914 the last passenger pigeon died in Cincinnati Zoo [Scheuring 2004, xv-xviii].

Gradually, two broad approaches to protecting the natural world developed in North America. ‘Preservationists’, personified by John Muir (1838-1914) [Muir 1988, 2001, 2009], believed in the intrinsic value of untouched wilderness and sought to create national parks unsullied by human interference. ‘Conservationists’, such as Muir’s friend-turned-rival Gifford Pinchot (1865-1946), believed in sustainable management of natural resources for long-term human benefit [Scheuring 2004]. These two broad approaches, the one more ecocentric, emphasising nature’s independent value and minimising human encroachment, and the other seeking a sustainable approach to using natural resources for anthropocentric benefit, continue to dominate discussion and practice within the conservation world, and are highly relevant to the debates this thesis focusses upon.

One particularly pertinent historical strand within nature conservation’s origins concerns Christian understandings of human responsibility towards nature. Whilst conservation’s roots are multiple and complex, it is important, given the secularism of contemporary conservation biology, that religious elements within conservation’s origins are recognised. Thus, in North

America, Muir's preservationism was influenced both by his strict Calvinist heritage and immersion in the Bible [Muir 1965, 27], and also by the esoteric transcendentalism of Ralph Waldo Emerson [Scheuering 2004, 1-6]. Likewise, Pinchot's forestry-based conservationism grew from a belief in humanity's duty of "moral stewardship" towards nature [Van Dyke 2010, 123] influenced by his deeply religious Christian upbringing [Scheuering 2004, 33].

In Britain, Puritans led early campaigns against the maltreatment of animals in bear-baiting and cock-fighting due to the pain caused to 'fellow creatures' [Preece 2003, 119-122]. Later, Wilberforce, Shaftesbury and others within the evangelical Clapham Sect not only campaigned against slavery and social abuses but were co-founders of the RSPCA and the Anti-vivisection League [RSPCA 1972; LeRoy 1986; Sampson 2009, 6]. Such is the list of evangelical Christian advocates for animals, including John Wesley (1703-1791) [Wesley 1872; Sampson, 2009, 6], Isaac Watts (1674-1748) [Watts 1866, 1719] and William Carey (1761-1834) [Mangalwadi and Mangalwadi 1993], that social historian Rod Preece observes, "almost all the publications and pamphlets put out by the early Societies for the Prevention of Cruelty to Animals ... have a very strong evangelical Christian bent" [Preece 2003, 36], and Keith Thomas' definitive *Man and the Natural World* states that the initial impulse for the campaigns against cruelty to animals was "strongly religious ... and an essential role was played by Puritans, Dissenters, Quakers and Evangelicals" [Thomas 1983, 180].

Much of this British evangelical passion was directed towards animal welfare rather than wildlife conservation, presumably because perceived threats towards nonhuman creatures were from vivisection and hunting. Nevertheless, it demonstrates a profound faith-based sensibility towards the wellbeing of animals. In addition, many early British natural scientists had an integrated understanding of science and Christian faith. Thus, John Ray (1627-1705), "with whom the adventure of modern science begins" [Armstrong 2000, 2], combined scientific discovery and natural theology in his opus magnum, *The Wisdom of God Manifested in the Works of the Creation* (1691). He rejected contemporary anthropocentrism, stating, "It is a generally received opinion that all this visible world was created for Man ... But though this be vulgarly received, yet wise men nowadays think otherwise" [Thomas, 1983, 167].

Similarly, Gilbert White, the epitome of the parson naturalist, whose detailed studies of Hampshire wildlife greatly improved scientific understanding [White 1993; Mabey 1993, 18], "advocated ideas that we now identify as key to the environmental movement, such as the link between all aspects of nature and the mutual dependence of each part of animal life to the

whole” [Barton 2002, 23]. Although Worster [1994] alleges White drew largely from ‘pagan-inspired’ Romanticism, his argument stems from pre-conceived notions that White’s love of natural history was incompatible with Christianity’s ‘imperial’ view of nature. In fact, White saw nature as revealing God’s wisdom within an ordered Newtonian universe [Barton 2002, 22]. Likewise, Carl Linnaeus, the Swedish botanist and father of modern taxonomy, believed in a divine Providence who designed each aspect of nature with purpose. As Barton concludes, “Both Gilbert White and Carl Linnaeus are better characterized as Christian naturalists ... Both saw nature as an expression of the character of the Christian God” [Barton 2002, 26].

In summary, Christian understandings of nature as open to reasoned investigation, alongside faith-based assumptions regarding the value of living creatures, played important contributory roles in the development of the conservation movement in both Europe and North America. The reasons why conservation science later became increasingly secular are beyond the scope of this thesis, and relate both to broader societal trends, and to the impact of the allegation that conventional Christian understandings of humanity’s role in nature are largely responsible for nature’s over-exploitation and depletion [White 1967].²

The ‘mission’ of wildlife conservation

What is significant for this thesis is to establish that nature conservation, both as a popular movement and as a scientific discipline, is reliant on an understanding of nature’s value that cannot be arrived at by science alone. As Richard Mabey states, “Conservation is often justified as being a scientifically objective process ... But these perspectives ... are the results of decisions and value judgments we have made about the relationships we want with nature” [Mabey 1993, 10]. If the origins of beliefs that wild nature is worthy of protection and humanity has a moral duty to care for it lie, at least partially, in Christian understandings which are now alien to many contemporary conservationists, then an alternative basis for nature’s value needs to be described. One attempt to do this is E. O. Wilson’s concept of *Biophilia* [Wilson 1984], the theory of an instinctive evolutionary bond between humans and other living creatures, and this will be re-examined in the conclusion to this thesis.

Modern conservation biology is sometimes characterised as ‘mission-driven science’ [Soulé 1985; Mace 2014]. As such, conservation biology, and the wider nature conservation

² See Chapter 2.

movement, are concerned not only with scientific data but with decisions based on ethical values. The mission that drives conservation has been characterised as “the passionate conviction, common to anyone engaged in conservation work, that unless the world’s leaders can be persuaded to understand and apply the principles of conservation biology, the earth may no longer be able to support life as we know it” [Gosler et al., 2013, 92]. Similarly, the editors of a standard conservation textbook admit that whilst conservation needs to be evidence-based, its mission means “natural science is necessary but not sufficient,” in that ethics, social science and politics are inevitably involved [Macdonald and Willis 2013, 469]. To speak of ‘mission’ distinguishes conservation science from other scientific disciplines and places it within an interdisciplinary field open to insights from social sciences, ethics and theology.

In today’s context, where conservation’s ‘mission’ is threatened by exponential growth in human population, consumption and environmental destruction, there is much discussion about how decision makers can more effectively be influenced to prioritise conservation. Much of that debate centres on ecosystem services (ES) as a method of quantifying nature’s value in terms that policy makers will appreciate, so it is important to explore how ES has come to define the relationship between humanity and the natural world.

Towards economic valuations of nature

The concept of ES was at the heart of the Millennium Ecosystem Assessment (MA) [2005], initiated by UN Secretary General Kofi Annan. The MA involved 1360 scientists globally in appraising the condition of, and trends within, the world’s ecosystems and the essential services they provide for human thriving (including clean water, food, forest products, flood control, and natural resources). The MA was thus a conscious attempt to link the health of nature with human development, and demonstrated both the interdependence of human and natural flourishing and the rapid, and often alarmingly non-linear, deterioration in the health of ecosystems across the world.

The MA consciously employed economic language, using terms such as ‘natural capital’, ‘audit’ and ‘balance sheet’. Its conclusion, that at least 60% of twenty-four ES analysed are being degraded, was a wake-up call to policy makers, not only to prevent biodiversity loss but also in maintaining a liveable world for humanity [MA 2005]. The MA built on work by scientists concerned that the battle to protect the world’s biodiversity would be lost unless an economic case could be made for nature’s value.

More recently, TEEB, *The Economics of Ecosystems and Biodiversity*, was developed by the European Union, the United Nations and later the G8, as an ongoing research project into “the economic significance of the global loss of biological diversity” [Sukhdev et al. 2008]. Its purpose has been defined as “analyzing the global economic benefit of biological diversity, the costs of the loss of biodiversity and the failure to take protective measures versus the costs of effective conservation” [Sukhdev 2010]. TEEB therefore uses economic metrics to evaluate the success or failure of conservation measures.

MA and TEEB build on long-standing work by environmental economists to demonstrate that nature provides goods and services which are economically vital, yet conventionally overlooked by economists as externalities. A seminal 1997 paper estimated the economic value of seventeen ES across 16 biomes as giving an averaged value of US\$33 trillion pa (compared to the then global GDP of US\$18 trillion). The paper argued for giving “the natural capital stock that produces these services adequate weight in the decision-making process, otherwise current and future human welfare may drastically suffer” [Costanza et al. 1997, 259].

The choice of economic language in advocating for nature conservation has caused controversy amongst conservationists. Some have welcomed it warmly. Maurice Strong, Secretary General of the 1992 Earth Summit in Rio, asserted: “In addressing the challenge of achieving global sustainability, we must apply the basic principles of business. This means running ‘Earth Incorporated’ with a depreciation, amortization and maintenance account” [Strong 1996]. More recently, in launching the International Union for the Conservation of Nature (IUCN)’s report on *Wildlife in a Changing World*, Jean-Christophe Vié, Deputy Head of IUCN’s Species Programme stated: “It’s time to recognize that nature is the largest company on Earth working for the benefit of 100 percent of humankind – and it’s doing it for free” [IUCN 2009]. Similarly, following the UK’s first National Ecosystem Assessment, based on the ES approach, the RSPB’s Conservation Director, Martin Harper, said: “The traditional view of economic growth is based on chasing GDP, but in fact we will all end up richer and happier if we begin to take into account the true value of nature.” [BBC / Richard Black 2011].

Not everybody is so enthusiastic. Martin Harper also commented, “no-one can put a pounds and pence value on everything in nature” [ibid], acknowledging the debate surrounding ES’ perceived shortcomings. Many conservation biologists are cautious about the dangers of valuing nature in ways that may undervalue less quantifiable yet essential ecosystem functions

[Redford and Adams 2009]. Others have been even more dismissive, arguing biodiversity has “inherent value, which cannot be measured or transformed into economic values in accurate and reliable ways” [FOEE 2014], and that ES inevitably commoditise and relativise nature’s value by placing it within a market-based economic system [Spash 2009, 2011, 2015].

Key Questions for this thesis

The relationship between science and values highlighted in the ongoing debate about ES goes to the heart of important philosophical and methodological dilemmas, upon which this thesis proposes Christian theology can shed light. Central to these are questions concerning the source and nature of the value of nonhuman creatures and the ecosystems that support them, and concerning ecological anthropology: the place and responsibility of the human species in relation to other living creatures. It is now time to outline these key questions upon which this thesis aims to provide some theological reflection:

1. **Why do we value wild nature?** In the light of the conservation movement’s inability to stem losses in biodiversity, there is renewed soul-searching by many scientists, thinkers and practitioners. What is it that drives human beings to protect wild nature? Why should biodiversity be protected? Does the value of species and ecosystems lie instrumentally in their perceived worth to human beings for the economic, provisioning, medical, cultural and other services they provide, or do species and even nature as a whole have value independently of their anthropocentric usefulness?
2. **Does the value of nonhuman creatures lie primarily in their biological status (as a species, subspecies or function within an ecosystem) or in their life as an individual creature?** This distinction is particularly important in comparing how the conservation and animal rights movements value nonhuman creatures. For instance, is it more important to protect individuals of a near-extinct species than of a comparatively common species? Is it morally legitimate to cull invasive introduced species which threaten the integrity of an ecosystem, or do invasive species have individual rights that should also be protected?
3. **Can and should we put an economic price on nature?** In a contemporary world dominated by market economics there is growing use of terms such as ‘Ecosystem Services’, ‘Natural Capital’, and ‘Biodiversity Offsetting’. Can accounting for nature financially give due protection to wild creatures and the ecosystems within which they live, or does it inevitably

relativise nature and reduce infinitely valuable entities to tradeable commodities? Similarly, is it possible to quantify the value of nonhuman species and their habitats with accuracy and in such a way as to include aesthetic, cultural and spiritual values, or are such values infinite or immeasurable? Is putting a price on something equivalent to measuring its value?

4. **What is an appropriate ecological anthropology?** Biodiversity conservation inevitably involves the active management of complex ecological systems, and value-judgments concerning the relative importance of particular species and habitats. What right do human beings have so to interfere in natural systems? Is conservation science at best self-protection of humanity's interests, at worst pseudo-scientific justification for subjective preferences concerning idealised concepts of nature, or do human beings have a deeper duty towards nature and, if so, from whence does this come? Is the language of conservation or stewardship inevitably managerial and exploitative, or are there more appropriate modes of relationship between human and nonhuman creatures? Similarly, how do we balance human development and nature's thriving? Where there are conflicts between threats to wildlife or habitats and the livelihoods of human communities, particularly those living in extreme poverty, or with long-established cultural histories of using nature in certain ways, how are decisions to be made which give genuine representation to human stakeholders and yet also advocate for other species, and how are the concomitant practical trade-offs to be negotiated?

Biblical ecological hermeneutics

These core questions posed by current conservation debates will now be brought into discussion with biblical theology. In attempting an ecological re-reading of the Christian scriptures in the light of biodiversity loss, the methodology this thesis adopts is shaped by how Christian theology has responded to other challenges posed by modernity and post-modernity, including gender (feminist and woman-ist theologies), economic and political hegemonies (liberationist theologies [Kirk 1979]) and the Shoah (post-holocaust theologies [Tracy 1982; Fiorenza and Tracy 1984]). Learning from these approaches both positively and negatively, an ecological re-reading of key texts is proposed, building on Ricoeur and involving a hermeneutic both of 'suspicion' (regarding distortions within past readings) and of 'retrieval' (concerning interpretations lost through cultural bias) [Tracy 1981, 1990; Stiver 2001]. This attempts to identify and challenge any unbiblical anthropocentrism or dualism imposed on biblical texts by philosophical assumptions within the mainstream western tradition. As a methodology it recognises that biblical texts are complex and varied in tone, content and emphasis, and yet

seeks to interrogate the texts through the question, ‘How does this read through the lens of God’s concern for non-human creation?’

In addition to examining specific pertinent texts, an attempt will be made to construct a canonical biblical overview from the perspective of God’s concern for, and human responsibilities towards, creatures other than human. Since Brevard Childs proposed a canonical approach to biblical interpretation [Childs 1978; 1979], there has been ongoing controversy regarding it amongst scholars [Barr 1980; Fowl 1985; Oswalt 1987; Pereira 2015; Räisänen 2000], so it is important to explain the approach this thesis will take.

The biblical canon’s multiplicity of authors and cultural-historical contexts inevitably lead to significant differences between and within texts. These differences go beyond context and literary genre, and form part of the internal scriptural dialogue inherent to any canonical reading of the Bible. Thus, not all biblical passages present an identical approach to the place of wild nature and there are some which, taken in isolation, suggest a deeply anthropocentric and utilitarian approach to other creatures.

Yet, despite the difficulties involved, it will be argued that a canonical approach is useful, and indeed crucial. Firstly, however problematic the historical process involved in constituting the canon [Räisänen 2000, 23], and in spite of areas of continued disagreement, “the Bible in its various forms has continued to function as an authoritative norm for the Church throughout its history” [Childs 1993, 66]. Thus, if the contents of this thesis in relating biblical insights to the current ecological crisis are to engage the worldwide Christian community, they need to take seriously the Christian scriptures in their final canonical shape.³

This does not mean ignoring the essential contributions of historical-critical approaches but instead seeking a lens through which to read the scriptures as a whole in all their complexity. As Childs says, “the issue at stake in canon turns on establishing a stance from which the Bible is to be read as Sacred Scripture” [1978, 54]. If the academy is to engage the worshipping community it needs to acknowledge that the diverse voices of the biblical authors are given ecclesial cohesion precisely by their adoption as canon: “the biblical text and its theological function as authoritative form belong inextricably together” [Childs 1993, 72].

³ Recognising the diversity of Christian understandings regarding the biblical canon, this thesis limits itself to the 66 books of the Western Protestant canon (39 in the Hebrew Bible, 29 in the New Testament), as these are, with rare exceptions, accepted by historic Christian denominations.

If a canonical approach is to be intellectually rigorous, it should be both critical and genuinely post-critical, employing post-modern insights into the limitations of Enlightenment rationalism. John Barton rightly argues, “It is only after we have seen how varied and inconsistent the Old Testament really is that we can begin to ask whether it can *nonetheless* be read as forming a unity” [Barton 1984, 99]. Whereas historical-critical approaches sought to put aside theological presuppositions to get behind the text and uncover its ‘original’ meaning, such approaches are now widely critiqued as betraying Enlightenment overconfidence in the possibility of human objectivity. Perdue describes this as, “the critical questioning of Enlightenment epistemology and the philosophy of positivism which it spawned” [2005, 12], and Barton describes the effects of postmodernism as “to banish the expression ‘really means’ to outer darkness” [1998, 17]. Barton, along with others including Frances Young [2013, 26-29], defend the continued usefulness of historical-critical studies but accept that human beings can never be completely objective. Thus, the raft of new theological approaches is a corrective to those historical-critical approaches which unconsciously betrayed overwhelmingly western, white, male, liberal assumptions.

Post-modern understandings are particularly relevant because Enlightenment rationalism has dominated conservation biology as well as theology. The failure of science-based conservation policies to achieve their goals is forcing recognition that engaging with alternative ‘unscientific’ worldviews may be crucial in achieving conservation’s objectives. For instance, attention to indigenous folklore may provide greater insights into protecting threatened species than scientific studies conducted by those with little understanding of local ecology or culture [Gosler et al. 2013, 98-99].

This thesis will avoid simple linear biblical arguments, acknowledging that, “There is much that is wild and untamed about the theological witness of the Old Testament that church theology does not face” [Brueggemann 1997, 107]. However, it will be proposed that, beyond the varied emphases within the canonical Christian scriptures, it is possible to discern signposts towards a coherent approach to wild nature applicable to today’s context. As will be explained in detail shortly, the four central theological chapters of this thesis take an overview of God’s four decisive interventions towards creation as described within the biblical canon as a whole: in the act of creation itself (*originalis* and *continua*), in establishing covenantal relationships with and within creation, in the Christ event, and in eschatological consummation. In each case, a canonical centre of gravity will be suggested, selecting authors and passages who develop the

theme of God's actions for all creation, human and nonhuman. The result is not uniformity but a form of 'polyphonic text', explored by Carol Newsom in relation to Job [Newsom 2009, 11ff], seeing different genres, authors and emphases as complementary modes of perception on a reality too vast for a single literary genre. Richard Bauckham similarly argues for seeing scripture as a 'coherent story', taking account of biblical criticism and post-modern literary criticism, yet discerning a remarkable unity in diversity, a "nonmodern metanarrative" [Bauckham 2003, 47],⁴ a dialectical resolution of differing voices.

In terms of hermeneutical methodology, there are several potential pitfalls this thesis aims to avoid. The first is the obvious mistake of extrapolating from ecologically sympathetic texts whilst ignoring 'inconvenient' passages. Such an approach will be eschewed in favour of seeking broad themes within and across particular authors, taking account of difficult passages, creating a dialogue between contrasting biblical voices, and allowing texts to speak for themselves in context.

A second danger consists of asking questions which are beyond the biblical texts' frame of reference. Biblical authors could not envisage humanity's impact upon wild nature becoming as destructive as it now is. Concepts such as 'biodiversity', 'wildlife conservation' and 'anthropogenic climate change' are all modern constructs. As with other areas of modernity and post-modernity, this does not make biblical texts irrelevant but it does make the hermeneutical task more complex. Sittler, following Ricoeur, is helpful in arguing for a non-ostensive reading of biblical texts wherein a dialogue is created between the text and the interpretative context of realities unimaginable to the original authors [Sittler, 1972]. A space is opened thereby, to discover what is theologically implicit within the text, although beyond the author's original scope. A concrete example, *pace* Sittler, is that of the great Christocentric hymn of Colossians 1:15-20, perhaps addressing a specific Gnostic context but with much wider Christological implications. It is a passage we will return to. Sittler's use of non-ostensive meaning is similar to David Ford's jazz-inspired notion of 'improvising in the Spirit' [Ford 2014], allowing the given-ness of biblical revelation imaginatively to address contemporary complexities without losing its essential theme. Ben Quash's notion of *Found Theology* [Quash 2013] likewise brings the 'givenness' of biblical texts into dialogue with a pneumatological understanding of how 'finding' a new historical context can allow fresh insights to emerge from old texts.

⁴ Bauckham argues that Lyotard's critique is limited to metanarratives arising from the hegemonic rationalistic claims of modernism, but not to the more diffuse, mytho-poetic, multi-voiced narratives of ancient worlds.

The risk in such an approach is improvising so far from the original melody that the variation is unrecognisable. To change the metaphor, non-ostensive interpretations must be rooted deeply in the soil of scripture, and pruned with the hermeneutical tools of tradition, reason and canonical perspective. Samuel Wells' exploration of theatrical improvisation as a model for Christian ethics [Wells 2004] draws helpful parallels between the foundational disciplines which undergird dramatic improvisation, and the formative ecclesial practices of scripture-reading, worship and sacrament. Quash also provides a helpful rationale involving maculation theory, reception aesthetics and abductive reasoning, arguing that "the perfection of God's revelation in Christ is not compromised by – indeed, precisely implies – an ongoing historical dynamic whereby, in God, human beings are constantly invited to relate the given to the found" [Quash 2013, xiv].

A third pitfall lies in imposing anachronistic contemporary categories upon ancient documents. This is precisely the mistake made by Norman Habel's *Earth Bible* project in seeking to sift out 'green' from 'grey' biblical texts through a grid of 'ecojustice principles'⁵ [Habel and Balabanski 2002, xx, 1-14]. Habel is explicit about his purpose: "to re-position our faith within an emerging worldview informed by ecology ... and to consider a radical re-reading of the text" [2009, 18]. Although Habel and his theological collaborators have provided many useful contributions to exegesis of specific biblical texts [see review by Marlow 2009, 86-94], their work is undermined by setting the Bible under the authority of a self-referential set of philosophically alien ecological criteria, greatly reducing the value of the project to all who take scriptural authority seriously.

One final issue needs to be addressed at the outset, since its influence upon biblical interpretation in the Western tradition has been so significant. This is the impact of Hellenistic philosophy upon patristic, scholastic, Reformational and Enlightenment thinking regarding the relationship between humans and other creatures. Christian theology has always sought dialogue with and, where possible, to incarnate itself within the philosophical traditions it encounters. This thesis recognises the enormous debt owed by Christian theology to the

⁵ The Earth Bible's Ecojustice Principles:

1. The Principle of Intrinsic Worth
2. The Principle of Interconnectedness
3. The Principle of Voice
4. The Principle of Purpose
5. The Principle of Mutual Custodianship
6. The Principle of Resistance

Hellenistic tradition philosophically and intellectually, and the ways in which that tradition has often been misrepresented in subsequent centuries. Nevertheless, it is proposed that two specific consequences of the engagement of patristic and early-modern Christian thinking with Hellenistic philosophy have had a distorting effect on attitudes to nonhuman creation.

These are, firstly, a deep matter-spirit and body-soul dualism largely alien to the Hebraic foundations of Christianity and, secondly, a profound anthropocentrism – assuming God’s exclusive or dominant interest is in the human species. The two are often inter-twined in their effect on theological thinking. As David Clough, in tracing theological attitudes to nonhuman animals writes, “It is not difficult to find Christian theologians stating that human beings are God’s sole or primary purpose in creation. It is harder, however, to find good theological argument in defence of this proposition” [Clough 2012, 15]. Early Church Fathers such as Clement of Alexandria and Origen were heavily influenced by Philo of Alexandria whose *On the Creation of the Cosmos According to Moses* drew its interpretation from Plato’s *Timaeus*, and placed humanity at the crown of creation by virtue of its ‘rational soul’ [Marlow 2009, 23-25]. Plato and Aristotle formed the intellectual world within which Christian theology was shaped and moulded. Writing of fourth century Christian thinkers, Terence Glacken observes, “They bolstered their own religion with whatever could be salvaged from the science, philosophy, and even the religion of the pagans” [1967, 190]. Later theologians, including Aquinas, built on this foundation. As Gilbert LaFreniere states, “The medieval worldview, it turns out, owes as much or more to Greek philosophy as it does to the Judaeo-Christian scriptures” [2007, 85].

In re-reading the Christian Bible, seeking to understand humanity’s place in nature, it is necessary consciously to resist the gravitational pull of these Hellenistic assumptions which have so shaped the Western theological tradition. In particular it is important to distinguish the inevitable perspectival anthropocentrism from various forms of anthropomorphism. Understanding the degree to which anthropocentric assumptions are so much more deeply-rooted in the theological tradition than in the Bible will be crucial in this thesis, as will further close delineation between various forms of theocentrism, ecocentrism and anthropocentrism.

The tension between Hellenistic and Hebraic philosophical approaches is at the root of a fault-line running through both the western theological and scientific worldviews. It parallels the fault-line between anthropocentric ‘conservationist’ and ecocentric ‘preservationist’

approaches to wild nature. Tracing this tension will be critical to the argument of this thesis since it relates precisely to the place of humanity in relation to other living creatures.

Platonic matter-spirit dualism and anthropocentrism were not only hugely influential upon the early church but also in the great European intellectual movements of the Renaissance, Reformation, Enlightenment and Romanticism. The rediscovery of Aristotle and Plato paved the way for a growing confidence in the roles of human reason in understanding the world and of human technology in shaping it. In many ways it was in this early-modern period that the most fateful changes occurred. Whereas patristic theologians were careful to place their anthropocentric understandings within a theocentric context, leading to a subtle theo-anthropocentrism, one of the major intellectual shifts of the Renaissance and Enlightenment was to see nature as open to rational human investigation, within which divine origins and values, whilst nominally recognised, played no part.

Michael Northcott alleges that it was above all Francis Bacon (1561-1626) and René Descartes (1596-1650) who promoted “scientific enquiry and power over nature as the dominant forces” in shaping Western culture, politics and thinking [Northcott 2013, 48; also, Harrison 1999]. Bacon separated the spiritual and material, confining religion to the redemption of souls and elevating scientists as priests of the material realm, rescuing the earth from the impact of the fall through human mastery and technological innovation. Bacon thus paved the way for a persistent deep dualism between the ‘subjective’ realm of religion and ethics, and the ‘objective’ world of science, industry, economics and politics, and also for a form of anthropocentrism effectively divorced from its theocentric moorings. The hermeneutic of ‘suspicion’ and ‘retrieval’ that will characterise this thesis involves questioning the Hellenistic roots and Enlightenment developments that have so deeply influenced biblical interpretation and humanity’s relationship with nature.

Theological structure

Using the methodology and hermeneutical approach described above, the core of this thesis will be four major theological chapters examining key biblical themes relating to the place of non-human creatures within God’s concerns, and human responsibilities towards the protection and conservation of fellow creatures. The choice of themes for these four chapters is based on a proposal of four distinct biblical divine initiatives with regard to all creation. Firstly, God’s actions in *creation* will be examined through an analysis of the Genesis creation accounts in

conversation with biblical Wisdom literature, particularly the book of Job. Secondly, God's instigation of the creational *covenant* in the Noachic account and later implemented through the Mosaic law will be seen as paradigmatic for Old Testament attitudes to relationships between people, land and creatures. Thirdly, God's incarnational and reconciliatory actions in *Christ* will provide a Christological perspective on the value of non-human creation. Fourthly and finally, an *eschatological* overview of Old and New Testament passages will seek to discern God's purposes regarding the eternal destiny of non-human creatures.

The conclusion to the thesis will weave together insights from all four theological chapters, tentatively seeking a coherent canonical ecological overview which remains critically sensitive to the diversity of biblical material and yet allows for the engagement of biblical material with the contemporary debate surrounding biodiversity. This will be described theologically in terms of a theo-eco-centric worldview, leading to a heterocentric or eccentric ethical orientation for humanity focussed on seeking the wellbeing of the other through the practical application of ethical virtues. It is suggested that, if such an understanding can be engaged with by the global Christian community, it has enormous potential for the renewal of Christian attitudes to conservation.

Equally, it is proposed that the conservation movement's current existential crisis requires a return to the fundamental question of why humans should be involved in the conservation of wild nature. Instrumentalist and utilitarian approaches (such as Ecosystem Services), whilst useful in achieving short-term gains, fail to address the limitations of anthropocentrism. Conservation Biology's current secularism needs to be augmented by engagement with the religious traditions which underlie the values of most of the world's population, in order to seek for common values which can inspire the cultural and behavioural change necessary for conservation to succeed in its aims.

CHAPTER 2

CREATION AND WISDOM

The twin creation accounts of Genesis 1:1-2:4 and Genesis 2:5-25, traditionally ascribed respectively to the Priestly and Yahwist sources, inevitably form the basis for most Christian theologies of creation. Michael Welker describes them as, “the orienting foundation for knowledge and talk about creation” [Welker 1999, 6], due both to their canonical placement and their historical influence upon the Western theological tradition.

Yet, as we will see, these are deeply problematic and contested texts with significant exegetical difficulties which, furthermore, have been interpreted through numerous philosophical and cultural lenses. Thus, this chapter proposes to read Genesis in dialogue with the book of Job, augmented by other biblical Wisdom literature, providing an alternative rich canonical seam of creation theology. The reasons for selecting Job will be discussed after an examination of difficulties concerning mainstream western readings of Genesis 1-2.

Textual and contextual challenges

The Genesis creation accounts have generated a vast theological and philosophical literature from patristic to modern times. This thesis limits itself to questions concerning humanity’s relationship with other living creatures. The first issue concerns the place of the Genesis creation accounts within canonical scripture. Whilst the theological significance of their location within the biblical canon is indisputable, it is equally noteworthy how little they are referred to elsewhere in the Hebrew Scriptures. In particular, the phrase “image of God” (*imago Dei*), of crucial relevance to ecological anthropology, occurs only within the primaeval narratives of Genesis 1-11 (1:26-27, 5:1, 9:6). Given the rich theological significance of the term, this suggests that most Old Testament writers were probably unaware of it and thus Genesis 1-11, in its final form, probably had a late, possibly exilic, authorship. As Richard Middleton argues, “On the face of it, it seems unlikely that so fecund a notion as the *imago Dei*, if it were early, would receive no intrascriptural commentary whatsoever, given the general proclivity of the biblical writers to engage in such commentary” [Middleton 2005, 144].

Despite its canonical scarcity, *Imago Dei* has engendered a bewildering variety of substantialist, relational, and functional interpretations throughout Christian history, including being en-souled (Ambrose), rationality (Athanasius), intellect and will (Augustine), moral righteousness

(the Reformers) and physically upright form (von Rad). It is not surprising that Karl Barth, in summarising earlier interpretations stated: “For it is obvious that their authors merely found the concept in the text and then proceeded to pure invention in accordance with the requirements of contemporary anthropology” [Barth 1958, 193].

Thus, in order to articulate a biblical ecological anthropology and adequately understand humanity’s place in relation to fellow creatures and wild nature, it is vital not only to explore the Genesis creation narratives but also to examine humanity’s place in creation elsewhere in the Hebrew Scriptures.

The two Genesis accounts

A second issue concerns perceived tensions between Genesis 1:1-2:4 and Genesis 2:5-25 regarding the relationship between humans and other living creatures. The first creation account is highly structured, symbolic and densely poetic in style, with parallelism between the first three days of separation and the second three days of filling. From patristic to modern times, most commentators have assumed a hierarchical progression through six ‘days’ of creation culminating in the creation of humanity. The second passage, in apparent contrast, begins with the first man’s creation from dust and the search for intimacy, initially with other animals and finally with the creation of woman. Some have seen humanity’s creation from physical matter, calling to tend the earth (2:15) and close connection with animal-kind as giving a radically different emphasis to the assumed hierarchy of Genesis 1:1-2:4.

John Passmore’s study, *Man’s Responsibility for Nature* [Passmore 1974], describes the ‘despotism’ tradition (also ‘dominionist’ or ‘mastery’) stemming from Genesis 1:26-28, which he identifies as the majority tradition in Western theology, and the minority ‘stewardship’ tradition, largely based on Genesis 2. Similarly, Paul Santmire discerns three ‘root metaphors’ across the biblical text, giving conflicting ecological messages [Santmire 1985]. One of these essential metaphors, ‘journey’, is largely absent in the creation accounts, but of the others, ‘ascent’ (the holy mountain; spiritual as superior to material) parallels the dominionist reading of Genesis 1, placing humanity above the rest of nature, and ‘fecundity’ (agrarian fertility and nature spirituality) is similar to Genesis 2’s depiction of Adam as made from the dust of the earth, called to till and keep the garden and tasked with naming the animals.

The philosopher and ethicist J. Baird Callicott argues, like Passmore, that there are two basic interpretative choices regarding Genesis: “One could either adopt the mastery interpretation or the stewardship interpretation, both of which put human beings in a dominant relation to nature” [Baird Callicott 1999, 188]. He himself favours the latter, stating, “I think that those who have argued that the stewardship interpretation is better supported by the text than [Lynn] White’s despotic interpretation have entirely won their case” [ibid, 191-192].

However, there are also strong critics of the term ‘stewardship’ in describing humanity’s place in nature. Whilst ‘stewardship’ may imply a more nurturing relationship than ‘dominion’ or ‘mastery’, Clare Palmer claims it is nevertheless an anthropocentric, managerial concept with damaging ecological consequences [Palmer 2006]. She objects to stewardship theologically, claiming, “God is understood to be an absentee landlord, who has put humanity in charge of his possessions” [ibid, 68]. David Horrell also notes that stewardship “does not appear as such in Genesis 1, nor indeed is it a major biblical theme, certainly not in relation to humanity’s responsibility for creation” [2010, 6]. According to Horrell (following Conradie), stewardship is a category we hermeneutically impose upon scripture rather than one that emerges from it. However, despite the absence of explicit reference to stewardship in Genesis, in the light of Christ’s stewardship parables it might be more accurate to say that stewardship is implicit rather than explicit as a biblical metaphor for humanity’s role vis-à-vis the rest of creation. This is a discussion to which we will return.

Returning to the distinctives of the Genesis 1 and 2 accounts, David Kelsey’s view is complex. He quotes Benno Jacob: “In chapter 1 man is the pinnacle of a pyramid, in chapter 2 the centre of a circle” [Kelsey 2009, 304], suggesting a hierarchical relationship in Genesis 1 and a more relational but nevertheless anthropocentric relationship in Genesis 2. Kelsey argues that whilst Genesis 1 identifies humans as related to other creatures and although the royal gift of ‘dominion’ is to be exercised benignly: “to be mediators, the protectors and preservers for other living creatures” [ibid, 305], yet the blessing of the *imago Dei* means that, “human creatures are understood by contrast to the rest of the creatures, to whom they are superior” [ibid 305]. In other words, Kelsey broadly concurs with interpreting *imago Dei* as creating a fundamental break between humans and other creatures. Kelsey concludes that “The picture given by Genesis 1 stresses the glory of human creatures, not their parity with other creatures as creature” [ibid, 304].

In comparison, Kelsey argues, Genesis 2:4b-24, whilst less hierarchical in acknowledging humanity's creation from dust, is nonetheless anthropocentric in seeing fellow creatures primarily as “sources of nourishment, delight and partnership for needy and desiring humankind” [ibid, 306]. Overall, taking the two Genesis accounts in isolation from the rest of the Hebrew scriptures, Kelsey attests: “there is nothing to check a purely exploitative relation by human creatures with nonhuman creatures except, perhaps, enlightened self-interest” [ibid, 306]. Kelsey therefore proposes using biblical wisdom literature, and specifically the book of Job, as an alternative source for theological anthropology.

In contrast to Kelsey, and counter-intuitively for an author who argues that, “the Bible is in the main ecologically unconscious”, James Nash sees Genesis 1 as containing “some rich ecotheological potential” [Nash 2009, 214]. Human dominion in Genesis 1, according to Nash, “is not a licence for despotic exploitation or managerial arrogance, contrary to common claims” [ibid, 216], but rather portrays an inherently interdependent creation with humanity’s dominion as simply the necessary leadership to enable a family or community to function effectively. Genesis 2, however, is problematic to Nash because of the command to “till and keep” the garden (2:15). Nash sees horticulture and agriculture as inevitably in tension with biodiversity conservation, and complicit in a hierarchical, exploitative worldview.

Overcoming preconceptions

Nash’s argument illustrates another hermeneutical problem which forms a third barrier to interpreting the Genesis creation accounts. All interpreters bring their preconceptions but, given the complexity and interpretative history of Genesis 1-2, many commentators seek evidence to support pre-existing ideas rather than allowing the text to challenge them. Nash’s claim that in Genesis 2:15 “the biblical author’s application seems to be to agricultural sustainability, not biological diversity” [2009, 217], imposes a contemporary dualism between human agriculture and wild nature which owes its origins to debates within the American conservation movement rather than the Hebraic worldview. Reading Nash’s comments in the light of the debate between ‘preservationists’ and ‘conservationists’, beginning with John Muir and Gifford Pinchot [Callicott 1999; Brown 2007; Scheuering 2004; Van Dyke 2010], helps in understanding Nash’s perspective but also in concluding that it contributes very little to interpreting Genesis 1-2.

Norman Habel makes a similar mistake, whilst reaching very different conclusions. As part of the *Earth Bible* project, the Genesis texts are read from the perspective of Earth (*erets*) [Habel 2000]. Consequently, Habel rejects traditional interpretations of Genesis 1 as a hierarchical progression towards humanity's creation in favour of a reading that "emphasizes the intrinsic value of Earth as the centre of the cosmos and the source of life" [ibid, 45]. He then rejects Genesis 1:26-30 as an alien interpolation into the original earth-centric account, noting that humanity (along with sea-monsters v.21) is created (*bara'*) rather than emanating from Earth. In contrast to Nash, Habel sees the *imago Dei* as hierarchically elevating humanity over against other creatures and Earth itself. The consequence is a radical separation between humanity and the earth with its creatures, and a fundamental reorientation of power-relations [ibid, 45-46].

Habel's interpretation consists of a post-modern earth-centric environmental sensibility projected upon the ancient Genesis texts. Aiming to read the Hebrew Bible "from the perspective of Earth" is as equally flawed as reading it in an anthropomomist manner. These are fundamentally theocentric texts, wherein the whole of creation, including both earth and humanity, find their origin and purpose in relation to God. To impose an alien hermeneutical matrix upon them as a means of evaluating their ecological worth, whether from an ecocentric or anthropocentric perspective, is to do violence to the texts.

Habel's reading of Genesis is perhaps a reaction against the twentieth-century critical consensus which excluded ecological considerations by seeing the Pentateuch exclusively through the lens of God's saving acts in human history (*Heilgeschichte*). Gerhard von Rad saw creation as simply a theatrical backdrop for salvation, arguing creation "performs only an ancillary function. ... It is but a magnificent foil for the message of salvation." [von Rad 1966, 138-139]⁶. Similarly, G. E. Wright, stated that "Nature was not an independent object ... It was instead a handmaiden, a servant of history" [G E Wright 1952, 38, 43]. Theodore Hiebert argues that, in so separating creation from redemptive history, von Rad and others were simply following "a well-defined modern philosophical distinction between nature and culture" emerging from Hegelian idealism [Hiebert 1996, 5, 17]. This deeply anthropocentric Enlightenment worldview confidently placed rational humanity at the centre of the universe and God's purposes, with fateful consequences in science and technology, as well as theology. Despite being much critiqued by contemporary Old Testament scholars from Brueggemann to Hiebert, the

⁶ von Rad's later writings qualified this judgment but it remained highly influential.

perception that nonhuman creation is only of marginal importance continues to be highly influential in seminaries and pulpits.

The post-Enlightenment anthropocentrism imposed on Genesis 1-2 by many biblical scholars is also shared by more populist defenders of human exceptionalism. One significant contemporary example is Stephen M. Vantassel, whose *Dominion over Wildlife? An Environmental Theology of Human-Wildlife Relations* [Vantassel, 2009] resolutely defends a ‘dominionist’ understanding of Genesis 1 and 2.

Vantassel unapologetically dedicates his book to fur-trappers for their “vital role in the responsible management of our natural resources” [ibid, v]. His definition of dominionism vividly summarises an extreme form of the ‘mastery’ understanding of Genesis: “The traditional view that humans were divinely placed in a position superior to animals in power and/or ontology and bestowed the privilege to utilize animals to fulfil human needs and desires” [ibid, xii]. This is an understanding that is clearly anthropomomist, seeing human interests as the only ones that matter. It is both hierarchical (“superior ... in power and/or ontology”) and also sees animals in a utilitarian way solely as a means of meeting “human needs and desires”. To Vantassel, it is the implication of Genesis 1:26-28 and also of natural order, that “humanity has a superior status in creation, and that this status provides a moral basis for humans to wield power over nature, and to compel it to serve human needs and interests” [Vantassel 2009, 2]. He quotes with approval those such as Baker [1991] who find in *imago Dei* the use of Royal language placing humanity at the pinnacle of creation, and attacks those such as Brueggemann⁷ who interpret Genesis in a less hierarchical way. Vantassel’s personal involvement in hunting and trapping wildlife, his vilification of all who discern creaturely commonality between humans and other animals within Genesis,⁸ and his selective use of both scripture and critical scholarship, mean that it is difficult to take his case seriously.

What commentators as diverse as Nash, Habel, von Rad and Vantassel share, overtly or implicitly, is a pre-existing worldview imposed upon the Genesis text. Whilst all interpretations are inevitably construals influenced by context [Middleton 2005, 33-37], the overwhelming anthropocentrism of Western cultures through the influences of Hellenistic philosophy,

⁷ Vantassel 2009, p.42 quotes Brueggemann: “the task of dominion does not have to do with exploitation and abuse. It has to do with securing the well-being of every other creature and bringing the promise of each to full fruition.” [Brueggemann 1982, pp.32-33]

⁸ Vantassel describes all his critics, including theologians such as Brueggemann, as C.A.R. (Christian Animal Rights) activists.

Renaissance humanism, Enlightenment rationalism and human mastery over nature through science and industry have greatly coloured majority interpretations of Genesis 1-2.

Lynn White's thesis

It is undoubtedly due to this anthropocentric interpretative heritage that Lynn White's famous thesis, *The Historical Roots of our Ecologic Crisis* [White 1967], has been so enormously influential. White's thesis and the massive debate ensuing from it, blaming the Judaeo-Christian worldview, and Genesis 1:26-28 in particular, for providing ideological foundations for contemporary environmental problems, provides a fourth major difficulty in approaching the Genesis texts. His original article in *Science* was republished numerous times [Lodge and Hamlin 2006, 31ff], and his thesis has frequently been taught uncritically in environmental studies courses around the world. According to Lodge and Hamlin, "White's thesis was simple and pithy. In many quarters it became gospel" [ibid, 3].

There has been an enormous literature critiquing White [Pepper 1984, 44-46]. Many have noted that his proposed solution was not rejection but reinterpretation of Judaeo-Christian attitudes to nature in the light of the minority non-anthropocentric tradition of St Francis of Assisi [White 1967, 1206-1207]. This, however, has done little to dent the popular perception that White's thesis proved a causal link between the Bible and ecological destruction. In Hiebert's words, it "has become a largely unquestioned truism in environmental circles" [1996, 14-15].

The academic consensus is that White's thesis was seriously flawed on a number of accounts. Firstly, his theological exegesis was sketchy and misleading. His assumptions about humanity's creation in the image of God were unfamiliar with twentieth century critical discussion and based on earlier understandings. However, as Peter Harrison argues, "It is the reception of the text, and not its presumed meaning, which is at issue here" [Harrison 1999, 89]. White needs to be critiqued primarily on historical rather than theological grounds, as it is the historical reception of Genesis 1 in the early modern period, rather than theological accuracy, upon which his thesis rests.

Secondly, and more importantly, White attributed too much historical weight to theological attitudes. History is never simply the history of ideas, but a complex interweaving of ideology with technological innovation, socio-cultural developments, individual actions and external factors including environmental change. As Elspeth Whitney asserts, "Theological doctrines ...

do not stand alone and in isolation from other aspects of cultural and social experience” [in Lodge and Hamlin 2006, 27]. Thus, the economic, scientific and technological achievements of Western societies, which White (following Weber) attributed to biblically-derived Protestant beliefs and ethics, had more complex causes including Islamic and Chinese discoveries, and were also, “in part contingent and fortuitous” [ibid, 47]. Peter Harrison similarly argues that late mediaeval technological improvements were simply “particular expressions of the universal tendency of all cultures to seek efficient means to provide for basic human needs” [Harrison 1999, 95].

Thirdly, the ideological link White suggests between the alleged Judaeo-Christian desacralisation of nature inherent in the *imago Dei* and a consequent growth in technological innovation is unproven. For instance, many European scientific and technological improvements built upon discoveries from Islamic and Chinese cultures. The Renaissance, with its increased humanistic focus, owed as much to a rediscovery of classical Hellenism as of biblical theology. As Bauckham sagely observes, White “neglected the new developments in the understanding of the human relationship to nature that occurred in the early modern period and to which the modern project of the aggressive domination of nature can be far more directly linked than it can to the Christian tradition of pre-modern times” [Bauckham 2011, 19]. Bauckham traces a line from Renaissance humanists such as Ficino to Francis Bacon (1561-1626), in terms of a radically new strain of teleological anthropocentrism, moving well beyond patristic and scholastic understandings of humanity’s privileged role in reflecting God’s beneficent power to, for the first time, seeing humans as set radically over and above nature, licensed to exploit and control it.

To Bacon, nature existed solely for human benefit and it was “a prime human duty to exploit it for human benefit as far as possible” [ibid, 50]. Bacon believed science and technology’s role was to restore humanity’s lost dominion over creation. This novel Baconian dualism between faith and science, combined with an increasingly mechanistic understanding of nature’s workings (seen in Descartes’ belief that animals were insensible automata), and a utilitarian attitude to the exploitation of animals and other natural ‘resources’, fit far better with the historical facts than White’s Genesis-based hypothesis. As Bauckham states in relation to Bacon and his contemporaries, “Despite the continued references to God the Creator, this is the point at which western attitudes to nature become exclusively anthropocentric rather than theocentric” [ibid, 52].

Creation theology beyond Genesis

Taken together, the paucity of reference to the language and imagery of Genesis 1-2 in the Hebrew scriptures, the perceived tensions between the two Genesis accounts, the interpretative history of imposing preconceived anthropocentric notions onto the text, and the specific issues surrounding Lynn White's critique and its reception, all create significant barriers to any agreed hermeneutical understanding of the Genesis creation accounts in relation to ecological anthropology.

David Kelsey has a strong case, therefore, in arguing that, in Genesis 1-2, "The narrative logic of stories of God creating is bent under the pressure of the narrative logic of God relating to reconcile" [Kelsey 2009, 162]. His critique is less of the text than of the layers of interpretative varnish that have to be scraped away to understand it in context. Kelsey suggests reading Genesis 1-2 in the light of Job 10, providing "separate voices in the chorus of canonical Holy Scripture" [ibid, 305]. In Job 10, humans are described variously as moulded from clay, curdled like cheese, clothed in flesh and knitted together, illustrating both creaturely ordinariness and divine attention to detail. Kelsey's conclusion is that whilst humanity in Genesis 1 may indeed be uniquely privileged, yet, in the light of Job, humanity is nevertheless "only the first among equals" and, taken together, Genesis and Job "stress the inherent relationality of human creatureliness" [ibid, 305-306].

In a similar vein, Bauckham, addressing centuries of anthropocentric interpretation of Genesis, states: "To counter such hubris and excess, strong medicine is needed ... We need to rediscover those biblical accounts of the human place in creation that are completely unconcerned with dominion and that do not set humans above other creatures" [2010, 37]. He argues that, whilst the Genesis accounts are basically theocentric, there is a tendency to read them anthropocentrically and hierarchically, overlooking the commonality between humans and other creatures: "The human rule over other creatures will be tyrannous unless it is placed in context of our more fundamental community with other creatures" [Bauckham 2011, 5].

Biblical wisdom and creation

Thus, in order to give perspective to the accounts of human-animal relationships in Genesis, this chapter will now turn to biblical wisdom literature, particularly the book of Job, and

associated canonical wisdom-influenced texts, and allow their voices to be held in dialogue with Genesis.

Choosing biblical wisdom literature as a starting point for theological enquiry into human responsibility towards other creatures necessitates acknowledging ongoing debates in Old Testament scholarship concerning its parameters and definition. James Crenshaw helpfully emphasises the key characteristics of wisdom, “in terms of relationships with things, people and the Creator” [Crenshaw 1969, 132]. Relationships with creation, humanity and God are thus three keys to understanding wisdom. Biblical wisdom is, consequently, perspectively anthropocentric insofar as it shapes its worldview around human flourishing, yet also ecocentric in recognising that reality is an indivisible whole which needs to be meditated upon to discover wisdom. Most fundamentally, though, biblical wisdom is theocentric, rooted in an understanding that “the fear of the Lord is the beginning of wisdom” (Proverbs 9:10). As Katharine Dell puts it, “It is a rich and multifaceted term covering both the human quest for wisdom and the divine origin of wisdom” [Dell 2000, 1-2].

Thus, biblical wisdom is essentially relational, inescapably although often implicitly religious, and characteristically integrative in dealing with the whole of human and non-human creation. Crenshaw’s summary is apt: “The one God embedded truth within all of reality. The human responsibility is to search for that insight and thus to learn to live in harmony with the cosmos” [Crenshaw 1998, 10].

Biblical wisdom is particularly suited to this thesis for several reasons. Firstly, as already suggested, it provides a fresh yet authentically biblical perspective on the theological quagmire of Genesis 1-2 and its relevance for ecological theology. The wealth of references to creation within the wisdom and wisdom-influenced literature of the Old Testament offer an opportunity for new insights into contentious passages. Whilst many twentieth century Old Testament theologians marginalised wisdom as well as creation in their focus on salvation history, recent decades have witnessed a rediscovery of wisdom’s theological importance, particularly in relation to creation. Even R. E. Clements, whilst seeing wisdom as “secondary and derivative rather than fundamental” in the Hebrew Bible [1995, 277], admits that, “of all the sections of the biblical literature it is the wisdom writings that give pride of place to the presuppositions of a world shaped and governed by a single all-wise, all-seeing and all-powerful Creator” [ibid, 271].

Secondly, biblical wisdom literature contains rich resources for creation theology. Leo Perdue writes, “One of the cardinal features of wisdom thought is creation” [1986, 295]. Katharine Dell helpfully distinguishes between core “wisdom literature”, comprising the Proverbs, Job and Ecclesiastes (Qoheleth), and “wisdom influence” which, for the purposes of creation theology, includes some Psalms and the Song of Songs [2000, 3]. Both genres are relevant to this thesis, as they share a perception that God’s wisdom is to be discerned by close attentiveness to the rhythms and creatures of the natural world. It is significant that the eponymous wisdom of Solomon, encompassed “plant life, from the cedar of Lebanon to the hyssop that grows out of walls. He also taught about animals and birds, reptiles and fish” (1 Kings 4:33).

Biblical wisdom challenges contemporary perceptions, in that wisdom is not chiefly found in the introspection of a philosopher’s cave or monk’s cell nor the rarefied atmosphere of academia, but in everyday encounter with the lived realities of material creation. Ellen Davis, in commenting on the injunction to “consider the ways” of the ant in order to be wise (Proverbs 6:6-11) notes that: “This is a kind of ‘nature wisdom’, acquired through close observation of the non-human world” and continues, “It is regrettable that the church has in the last three centuries largely lost sight of the fact that ‘nature wisdom’ is indispensable to an accurate estimation of the proper human role in God’s creation. Perhaps the time has at last come for the revival of this branch of theology” [2000, 56].

Thirdly, wisdom provides a particularly constructive space for Christian interaction with other faiths and worldviews on ecological issues. Theologies embedded in historical and theological particularities such as biblical salvation history, covenantal theology and Christocentric framings of redemption and cosmic consummation, whilst essential to biblical theology, may become foci for ideological divergences between faiths. Biblical wisdom however, in being inclusive in its telling of the human condition in relation to nature, provides common ground for interfaith encounter. It provides a context within which genuine dialogue may take place, establishing a secure foundation upon which more contested subjects may later be considered.

Biblical wisdom is complex and varied, but creates shared space both in its parallels to extra-biblical wisdom and in the less dogmatic nature of its content. Wisdom is often dialogical, and even the imperative aphorisms of Proverbs are often complemented by approaches from divergent, even contradictory, angles. Importantly, this does not mean rejecting the rest of the canon as irrelevant to creation theology. Indeed, if Christian ecological theology is to be wholeheartedly biblical it must engage with the Christocentric thrust of the canonical scriptures

as a whole. However, as will be argued, taking wisdom as a starting place allows a shift of hermeneutical perspective shedding fresh light on the whole Bible.

This chapter will briefly examine nature-wisdom as paradigmatic in Proverbs, before a detailed examination of the book of Job, which responds to and challenges Proverbs' assumptions, followed by insights from specific wisdom-influenced Psalms. It is proposed that Job, particularly the divine speeches in 38-41, provides particularly illuminating insights into biblical creation theology and the questions this thesis addresses.

Proverbial nature wisdom

When the book of Proverbs informs the reader that wisdom is not a product of human intelligence alone, but begins with the "fear of the Lord" (Proverbs 9:10) it is asserting two core Hebraic theological concepts. Firstly, Proverbs encourages an orientation that is theocentric rather than anthropocentric. Knowledge of God, rather than self-knowledge, is the key to wisdom. Ellen Davis puts it thus: "The sages strike directly at the root of the problem: 'Do not be wise in your own eyes' (Proverbs 3:7). If we would know the world without doing damage to it and ourselves, then we must raise our sights about our own cleverness and fix them on God, the creator of earth and heaven (vv.19-20)" [2000, 44]. Secondly, wisdom is found in lived relationship both with other people and the natural world of land and creatures. The book of Proverbs is full of detailed observation of the natural world, including ants, eagles, snakes, ants, badgers, locusts, lizards, lions, roosters and goats (6:6-11; 30:18-19, 24-31). There is a tacit assumption within Proverbs, and more widely within biblical wisdom literature, that observing wild nature in detail brings a deeper awareness of self, of others, of ethical reality and of God. In other words, nature-study is a key to wisdom.

Two of the most remarkable passages in Proverbs are 3:13-35 and 8:22-31 which, taken together, offer a prolonged meditation on personified Wisdom. Given ancient Israel's strict monotheism, Lady Wisdom is most likely a literary trope, rather than a goddess as in other ancient near eastern creation accounts. She is pictured gambolling playfully alongside the Creator in the joyful dance of creation (8:30-31). Kelsey suggests that, "Woman Wisdom stands in for creation, and God's relation to her is paradigmatic of the way God actively relates to creation as its creator" [2009, 163]. Whether or not Wisdom represents creation as a whole, she is clearly created rather than pre-existent (8:2), and Kelsey is surely correct in discerning an implicit connection between God's relationship with Wisdom and God's relationship with the

whole creation. God delights in both Wisdom and creation. In echoes of Genesis 1:31's "very good", the keynote in Proverbs is God's enjoyment of the whole creation including Wisdom, and creation / Wisdom's reciprocal delight in God. Davis states, "The picture of Wisdom playing, even giddily, before God must be allowed to stand as the important theological statement it is. This scene both complements and amplifies the picture of creation in Genesis 1" [2000, 68]. As Hugo Rahner argues, to God creation is not necessary but is an outflow of playful, generous love [1972, 11].

Kelsey draws out the implications of the intimate mutual enjoyment between God and creation in Proverbs, concluding: "What God creates in affectionate and just attention, God values. What God values, God is self-committed to sustain and nurture" [Kelsey, 2009, 164]. The clear implication of Proverbs is that if God is so caught up in love and delight at the mystery and wonder of creation, then so also should wise people be. Although biblical wisdom literature does not explicitly articulate a doctrine of humanity as *imago Dei*, it envisages a world that functions well when humans are wisely attentive to, delight in, and show appropriate nurturing care to the world that God has made and the creatures that inhabit it. Proverbs informs us:

"The righteous care for the needs of their animals,
but the kindest acts of the wicked are cruel." (Proverbs 12:10)

Proverbs also describes an interdependent world where human and animal welfare are interlinked, and humans lay aside their habitual hubris in favour of wise learning from God and from creation:

"Be sure you know the condition of your flocks,
give careful attention to your herds;
for riches do not endure for ever,
and a crown is not secure for all generations.
When the hay is removed and new growth appears
and the grass from the hills is gathered in,
the lambs will provide you with clothing,
and the goats with the price of a field.
You will have plenty of goats' milk to feed your family
and to nourish your female servants." (Proverbs 27:23-27)

Job: God's wisdom and wild nature

The book of Job is different in style and content from most of the Old Testament, even from other wisdom literature. It contains a multiplicity of literary genres including prose, poetry, drama, myth, judicial debate, dialogue, reflection, and theophany. Some commentators have regarded it as a muddle of conflicting literary sources ruined by redactive interference and an inappropriate happy ending [listed in Rendtorff 1986]. Others have seen in the divine speeches of Job 38-41 an Almighty bully, intimidating Job and cruelly forcing him into submission [notably Jung 1984].

However, a canonical approach necessitates dealing with the text as received, and recent commentators have found theological significance precisely in the variety of genres within Job. Habel says, "The text we possess can be interpreted as a literary whole integrating prose and poetic material into a rich paradoxical totality" [1985, 9]. Dell argues convincingly that Job is "sceptical literature", consciously parodying a variety of genres in order to convey in literary form its "radical scepticism" about conventional theological answers [Dell 1991]. She gives examples of Job 7:11-21 as a parody of Psalm 8, Job 10:8-12 of Psalm 139 and Job 23:8-9 of Psalm 23 [ibid,148]. Similarly, Carol Newsom portrays Job as "polyphonic text", seeing the different genres as complementary modes of perception on a reality which cannot be contained within a single literary genre [2009, 11ff].

Job is unique within the biblical corpus in several regards. It contains the most profound biblical engagement with issues of theodicy. It subverts and reinvents the genre of biblical wisdom, standing in tension with the confident assurances of Proverbs that the righteous and god-fearing will flourish, and pointing to a deeper wrestling with orientation and relationship rather than resolution or settled answers. Job is also important for theological anthropology, as David Kelsey recognises [Kelsey 2009]. The questions that Job provokes, particularly in the divine speeches (Job 38-41), are as much about 'Who do you think you are?' as 'Why do the innocent suffer?'

The book of Job's theological questioning makes it highly significant for theological enquiry *per se*. It encourages the reader and the worshipping community to engage in the task of theology as wrestling with multifaceted truths. Theology in Job is largely tentative and concerns orientation rather than destination. Most importantly, the theological search is not conducted in the rarefied atmosphere of the royal court or the purified ritual of the sanctuary, but in

communal engagement with the mundane, brutal, and joyful realities of daily living. The theological task is not abstract, indifferent or objective. Of necessity it engages its participants at an existential level. As David Ford argues in relation to Joban wisdom: “It is about the most fundamental questioning and searching ... but even that is not primary: it is above all about being questioned and searched” [Ford 2007, 93].

This Joban theological provisionality is vital in examining the book’s contribution to understanding the relationship between humanity and wild nature. Envisioning theology, not as immutable truth but as reconciling lived human experience with divergent scriptural perspectives, integrates Job’s contribution with other biblical insights into humanity’s place amongst the creatures. In Job, the God of creation is also the God of personal history and of revelation, and therefore all truth is God’s truth.

Thus, in terms of conservation biology and the practice of wildlife conservation, we should not expect all-encompassing definitive answers but rather a complex web of tentative contextual wisdom, open to correction, and sensitive to local conditions. Recent developments in conservation biology are analogous, recognising the importance not only of cultural sensitivity in delivering conservation outcomes, but of enlisting “traditional ecological knowledge” (TEK) which may originate in ‘unscientific’ worldviews, yet incorporates local knowledge and wisdom that is scientifically invaluable [Gosler et al. 2013].

The text of Job includes numerous references to the natural world, from the cosmological and meteorological, via the agricultural and seasonal, through to numerous domestic and wild animals. References to nature are included in the majority of speeches by Job and his accusers, building to a crescendo in Job’s case against God (notably Job 28) and in the divine speeches.⁹ This thesis will focus particularly on the place of animals in the divine speeches, but within the wider context of Job’s engagement with nature.

This creational content might simply be seen as reflecting the dependence upon nature common to all ancient agrarian cultures, and the general illustrative sense in which wisdom literature draws upon nature as in Proverbs 3:19-20, 30:15-19, 24-31. However, creation’s role is not simply exemplary but fundamental to the philosophical and theological battle that takes place throughout Job, culminating in chapters 38-41. William P. Brown calls this “The ethos of the

⁹ This author counted 298 verses with direct reference to the natural world in the book of Job.

cosmos” [Brown 1999], the sense in which observations of natural phenomena and seasonal patterns represent a divine moral order within creation, reflected in human cultural and social norms. As Brown argues, “Every model of the cosmos conveys an ethos as well as a mythos,” [ibid, 2] a moral *Weltanschauung* as much as a sacred story.

In the book of Job, nature becomes the contested space within which the competing ethical worldviews of Job, Eliphaz, Bildad, Zophar and Elihu battle for supremacy, before the divine speeches overturn all their words with a comprehensive natural tour-de-force. In the juridical setting of the debate, wherein Job is put on trial by his erstwhile friends but turns the tables by making a legal case against the Deity, wild animals and cosmological events are repeatedly placed in the witness box by both sides. Thus, within Job’s opening speech, the day and night of his birth are personified before being cursed with death (3:3), darkness (3:4-6), and barrenness (3:7). Day and night are divinely instituted in creation (Genesis 1:3-5, 14-19) and Job is verbalising an “un-creation account” [Schifferdecker 2008, 28], demanding that the heavenly bodies including morning stars and sunlight (3:9) cease their natural roles.

Job also refers to Leviathan, the legendary sea monster (3:8) who reappears in the Divine speeches (41:1-34). This is one of several occasions where the speeches radically reinterpret earlier natural imagery. In Job 3, Leviathan symbolises the fearsome chaos of the oceans, kept within bounds since creation but now invited to overturn all known order and structure. Yet, when Leviathan is re-introduced, not only is Job (symbolic of all humanity) teased for his inability to control it (41:1-9), but alongside the conventional descriptions of its terrifying, fire-breathing, armour-plated, crocodilian strength (41:13-32) there is a new note. This monster no longer symbolises unknown terrors but is a creature of the God to whom everything under heaven belongs (41: 11). It is fearsome, but is known and placed within God’s mysterious ecology rather than belonging beyond the borders of understanding. Moreover, it is spoken of with something approaching affection and respect:

“I will not keep silence concerning its limbs,
or its mighty strength, or its splendid frame.” (41:12)

“On earth it has no equal, a creature without fear.
It surveys everything that is lofty; it is king over all that are proud.” (41:33-34)

Whereas Job sees Leviathan as representing the overturning of universal moral order (justifying his outrage against an impotent or capricious Divinity), the divine speeches place it firmly within the moral circle. Mysterious and terrifying creatures are included within the orbit of a much larger moral universe which Job never fully comprehends, yet over which God has oversight.

Leviathan's repositioning is ecologically significant in challenging the anthropocentric tendency to value only those parts of nature which are of apparent benefit to humanity. Much conservation work focuses on flagship species, defined as "popular, charismatic species that serve as symbols and rallying points to stimulate conservation awareness and action" [Heywood, 1995, 491]. Flagship species are typically charismatic megafauna such as the giant panda (*Ailuropoda melanoleuca*), Bengal tiger (*Panthera tigris*), or African elephant (*Loxodonta africana*). Whilst there are clear advantages in using such species emblematically to protect whole ecosystems, there are dangers that conservation priorities become skewed at the expense of less attractive but more vulnerable species, or of habitats that do not contain appropriate flagship species [Simberloff 1998]. The conservation movement is aware of these dangers and there is much debate about single-species conservation focusing on flagship or keystone species,¹⁰ as against landscape-scale or ecosystem conservation.

Aldo Leopold eloquently described the dangers of valuing only part of nature's diversity: "The last word in ignorance is the man who says of an animal or plant: 'What good is it?' If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering" [1993, 146]. Leopold's view is in accordance with the divine speeches. The book of Job's contribution to this aspect of the conservation debate is to assert that even the Leviathan, the dangerous and ugly side of wild nature, has a place within God's ecology and is worthy of respect and preservation. This re-evaluation of Leviathan challenges human approaches to nature which are reductionist or anthropocentric, valuing only those aspects of wild nature which appear beneficial or beautiful to humanity.

The other apparently mythological creature in the divine speeches, Behemoth (40:15-24), may also be referred to earlier in Job, although the text is less conclusive. In Job's reply to Zophar

¹⁰ Keystone species, often predators, are those which have a disproportionately greater impact on their environment than their abundance would initially suggest.

the Naamathite, there is a passage regarding the contested significance of wild creatures to the moral order. Its importance is underlined by it being the only passage in the book prior to the Divine speeches where the tetragrammaton, YHWH, is used:

“But ask the animals, and they will teach you;
the birds of the air, and they will tell you;
ask the plants of the earth, and they will teach you;
and the fish of the sea will declare to you.
Who among all these does not know
that the hand of the Lord has done this?
In his hand is the life of every living thing
and the breath of every human being.” (12:7-10)

The Hebrew for ‘animals’ in 12:7 is *behemoth* [Brown 1999, 330 n.28] and, given the relevance of these verses both for Job’s argument against his erstwhile friends and God’s later refutation of that argument, this may well be an intentional allusion to Chapter 40. In 12:7-10, Job calls upon wild creatures as witnesses against his accusers, particularly Zophar who earlier mocked the possibility of Job ever understanding God’s purposes: “Can you find out the deep things of God” (11:7), marshalling natural imagery from the cosmological (11:8) to the absurd, comparing the likelihood of a wild ass acquiring humanity to that of Job discovering wisdom (11:12). Job challenges this description of nature’s inscrutability, with its passive fatalism, by arguing that humanity can indeed learn God’s ways from observing nature closely.

Job 12:7-10 subversively parallels sapiential convention in Proverbs (3:19-20, 6:6-8, 8:22-31, 30:18-19, 24-31), by arguing that creation reveals God’s wisdom, as well as denying that the righteous prosper and the wicked are punished. Dell states, “Job may well represent a reaction away from Proverbs rather than a distinct development beyond its ideas” [Dell 2000, 32]. Living creatures may be “in God’s hands” (12:10) and wisdom and strength belong to God (12:13), yet within Job’s experience and within the natural world no comfort is found in this. As Brown puts it, “To be in God’s hands is not a safe place to be, and there is no escape. The plants and animals clearly apprehend this indubitable fact, for they are firsthand witnesses to the oppressive nature of divine providence” [Brown 1999, 332].

This, surely, is the background to Behemoth’s introduction in 40:15ff. Once again, wild beasts become the arena for contesting the moral order. Commentators are divided as to whether

Behemoth is a genuine creature (either hippopotamus or, less-likely, water buffalo [ibid, 369]) or a mythical beast. Robert Gordis argues strongly that, “The passage is meaningful only if Behemot is a real creature in the natural world fashioned at the same time as part of the process of divine creation” [1985, 197]. Certainly, God’s comparison of Job to Behemoth in their shared creatureliness (“Look at Behemoth, which I made just as I made you” 40:15) loses its power unless this is a biological entity rather than a literary construct.

Whereas Job appealed to the animals (*behemot*) assuming he understood them (12:7-10), the author makes it clear that only God can understand or tame Behemoth. It may be herbivorous (40:15; unlikely in a mythical monster) but it cannot be controlled by humanity’s hooks and snares (40:24) and can be approached only by God (40:19b). Yet, whilst fearsome and fearless, it is in harmony with its surroundings. The mountains yield it food, other animals play around it, and trees shade and protect it (40:20-22). Like Leviathan, Behemoth is simultaneously beyond Job’s comprehension and within God’s orbit (“the first of the great acts of God” 40:19a). It is an intrinsic and harmonious part of a biological ecosystem and a moral universe, which are larger and stranger than Job imagined, and yet understood and held together by the Creator.

In addition to Behemoth and Leviathan, there are references in earlier speeches to several of the ten other creatures which God describes in 38:39-39:30, namely lion and raven (38:39-41), mountain goat and deer (39: 1-4), wild ass (onager; 39:5-8), wild ox (auroch; 39:9-12), ostrich (39:13-18), warhorse (39:19-25), hawk (39:26) and eagle or vulture (39:27-30). Of these, lions are referred to by Eliphaz (4:10-11) and Job himself (10:16 and 28:8), onager by Job (6:5, 24:5-8, 30:6-7) and Zophar (11:12), auroch by Job (6:5 although this may refer to domesticated cattle), ostrich by Job (30:29), eagle by Job (9:26) and birds of prey (potentially including both hawk, and eagle or vulture) in 28:7.

Taking these creatures collectively, there are significant parallels and tensions between how they are portrayed in the divine speeches, and by Job and his accusers. The author of the divine speeches describes each in attentive and affectionate detail; all are unique, valued, and moral subjects rather than objects onto which human feelings are projected. To Job and his colleagues, however, wild animals characterise a moral world revolving around human interests. Thus, Eliphaz uses lions to describe God’s punishment of the wicked, describing with relish how lion cubs starve when God withholds food (4:7-11). Job sees himself as a lion hunted by a vexatious God (10:16-17), and favourably compares the human ability to mine deep below the earth’s

surface with the inability of lions and other wild animals to do so (28:1-8). Lions, to Eliphaz are feared but detested, whilst to Job they symbolise both strength and contingency. As objectified symbols of nature's alien power and threat, they relate to humanity only in their vulnerability to a capricious Deity.

In contrast, the divine speeches invite Job to provide for the lion and to understand its behaviour (38:39-40). Refuting Eliphaz, God is the lion's protector and provider, not its persecutor. Moreover, whilst independent of human control, lions are absolutely dependent upon a God who knows their habits and their habitat. William Brown accurately summarises the contrast: "For Job and his friends, the lion is worthy of only fear and contempt ... In the divine economy, however ... God has transformed an object of fear and disdain to one of compassion" [Brown, 1999, 361]. There is a significant parallel between Job 38:39-40's appreciation of lions and Psalm 104:20-23 where lions and humans are fellow-citizens in a theocentric creation, equally dependent for their sustenance on God's provision and the earth's resources.

As the list continues, divine delight in the diversity and detail of creation becomes even more evident. God is a gentle midwife to mountain goat and deer, whereas Job is of no relevance to their gestation and birth (39:1-4). The onager, or wild ass, which Zophar makes into a figure of fun (11:12) and Job sees as a hapless and pathetic illustration of his own troubles (6:5) and those of the poor and marginalised (24:5-8; 30:1-9) is, to God, wild and free beyond the restrictions of human society (39:5-8). What is more, the onager is given grassland steppes as its home, ascribing it a value totally independent of humanity. Similarly, Job (and with him all humanity) is mocked for being unable to harness the wild auroch (39:9-12). Here is a creature, not in competition for resources, but whose existence and importance matter to God and for whom human beings are marginal.

The description of the ostrich, which Job regards as a despised outcast associated with jackals (30:29), is one of the most remarkable descriptions in these speeches. Acknowledging the oddity and apparent stupidity of this flightless bird (39:13-16), God nevertheless humourously celebrates its bravery and superior speed. The ostrich is no miserable fool but a joyful, wing-flapping, elegant long-distance runner. Despite the anthropomorphic elements to the description, the abiding impression, once again, is of a creature that humans fail to understand but that matters deeply to God.

The warhorse initially appears a surprising inclusion, in that it alone is used by human beings, but again the emphasis is on its proud independence (39:19-25). Its strength and bravery mean that humans depend on it rather than vice versa. Moreover, it is celebrated as God's creature, leaping, snorting, pawing, and laughing in its own right. It is a subject of moral importance under the Creator's design and care, rather than simply an objectified weapon of war.

Finally, the hawk and eagle are described soaring above and beyond humanity's earthbound restrictions (39:26-30). Human wisdom and knowledge are left behind by these creatures which remain under God's command. Human revulsion at their dietary habits, devouring blood and feeding off carcasses, is swept aside. Like all the species in the divine speeches, each has their own *raison d'être* and each is answerable to God alone. As Gordis points out, "They possess a beauty which human beings can enjoy, but basically they were not created to serve man, but to fulfil God's purpose" [Gordis 1985, 196].

The depiction of wildlife in Job 38-39 serves to reorient Job's worldview profoundly. No longer can he see animals simply as objects for work, food, or poetic illustration, and no longer can he see privileged humans as the sole locus of God's purposeful interest. Karen Pidcock-Lester puts it vividly: "It is as though God is saying, 'Who do you think you are, Job? You are not the center of the universe.' God is. And what's more, the God who is at the center is not cold or distant, not deaf or even silent. The God who is at the center of the universe is in love with the world. Every bit of it" [Pidcock-Lester 2000, 128-129].

Within the divine speeches it is Job 38:25-27 that most explicitly dethrones the illusion that the earth was made exclusively for humanity's use:

"Who has cut a channel for the torrents of rain,
and a way for the thunderbolt,
to bring rain on a land where no one lives,
on the desert, which is empty of human life,
to satisfy the waste and desolate land,
and to make the ground put forth grass?"

God's question mocks hubristic anthropocentrism. As John Muir famously observed, the idea that the world revolves around humanity "is a presumption not supported by all the facts" [Muir 1988, 4]. Whereas in chapters 1-37, "humanity is considered by all participants in the dialogue

to be the chief object of God's attention and most important of God's creatures" [Schifferdecker 2008, 61], in contrast the divine speeches proclaim that places and creatures beyond the circumference of human interest matter greatly to God.

The implications of the divine speeches for wildlife conservation are significant. Whilst the book of Job does not contain a coherent conservation ethic, it nevertheless suggests a view of wild nature which challenges the presuppositions of today's globalised world. It suggests a revolution of the imagination which lifts humanity beyond its inherent anthropocentrism into a larger moral universe wherein animals and humans belong together in God's world.

The Psalms, wisdom and creation

The Psalms see creation as evidence of God's wisdom (104:24, 135:5), and therefore a source of doxological inspiration, drawing humanity towards worship and, importantly, affirming that nonhuman creatures praise God independently, according to their kind. More than 40 of the 150 canonical Psalms explicitly express nonhuman creation's worship of its Creator,¹¹ and the doctrine of creation appears in each of the five Books of Psalms.

In addition, the Psalms affirm God's care and provision for all creatures. Psalm 145:9 states "The Lord is good to all; he has compassion on all he has made." The term *râcham*, denoting God's compassion towards all creatures, is consistently used in the Hebrew Scriptures both of God's characteristic nature and of human behaviour in response. The Hebrew root relates to the word for 'womb', suggesting a deep protective and nurturing instinct. God's compassion is a major theological theme in the Psalms [Bell 2018, 97-104], so it is unsurprising that Psalm 145 is central to Jewish worship, uniquely repeated three times daily [Apple 2016]. This note of God's compassion towards all creatures is important in discerning the manner in which humanity, as the *imago Dei*, is to reflect God's character towards nonhuman creatures. If God has constant maternal compassion towards all living creatures, the implication is that such an attitude should also characterise human-animal relations.

Psalm 104 is worthy of particular consideration. It stands alongside Genesis 1-2 and the Joban Divine speeches as a third great creation narrative, more extensive and detailed than Genesis.

¹¹ Psalm 18:7-15, 19:1-6, 24:1, 29:3-11, 33:5-11; 36:5-9; 42:6-9; 46:4-10; 47:7; 50:1-4, 12; 57:5-11; 65:5-13; 68:7-10; 69:34; 71:19; 72:1-19; 74:12-17; 77:16-19; 78; 80:8-13; 83:13-15; 84:3-6; 89:9-13; 93:1-4; 96:11-13; 97:1-6; 98:7-9; 100:1-3; 104:1-35; 105:16, 28, 41; 107:25-38; 108:4-5; 113:4-6; 114:1-8; 119:64, 90; 135:6-7; 139:7-10; 144:5-15; 145:13-21; 146:6; 147:4, 8-9, 15-18; 148:1-13

In it, a variety of creatures, mainly wild animals living independently of humanity, join in praising their Creator. It is bracketed by exclamations of God's greatness and power, and the focus is resolutely theocentric. Unlike Genesis, Psalm 104 cannot be construed as describing an anthropocentric, let alone anthropomomist, world. In it, humanity is but one of God's works, neither described as created last nor given authority over other creatures. Across 35 verses, references to humanity are few, and significant both in what they say and what they omit. In vs. 14-15 God allows people to cultivate plants, producing wine, oil and bread, yet God's provision also extends to running water for donkeys, trees for nesting birds, rain for the soil, grass for cattle, and mountains for goats and hyrax. In vs. 19-23 the rhythms of night and day, dark and light are described, and the psalmist uses three stanzas (vs. 20-22) to describe creatures that live and eat by night and only one stanza (vs.23) to humans who work by daylight, almost deliberately challenging humanity's habitual anthropocentrism.

The final reference to humanity in v.35 contains the psalmist's wish that God would remove sinners from the earth. The contemporary conviction that humans are the 'virus species',¹² without which an otherwise good creation would thrive, would be alien to the Psalmist who carefully includes humanity amongst God's creatures. Yet, the world of Psalm 104 is neither teleologically nor functionally anthropocentric. The earth belongs not to humanity but firstly to God and secondarily to all the creatures that God sustains and cares for, with humans simply as one amongst the many. The only reference to any species having ownership over any part of creation is in v.18 where high mountains 'belong to' the wild goats. According to Psalm 104, the natural world provides for all species and its riches are to be shared, not accumulated or squandered by one species at the expense of others.

Not all the Psalms, however, appear to affirm such a nurturing relationship between humanity and creation. Psalm 8, in particular, parallels Genesis 1 in placing humans in a position of supremacy over creation:

"You have made them a little lower than the angels

¹² eg. Agent Smith in the film *The Matrix* (1989): "Every mammal on this planet instinctively develops a natural equilibrium with the surrounding environment but you humans do not. You move to an area and you multiply and multiply until every natural resource is consumed and the only way you can survive is to spread to another area. There is another organism on this planet that follows the same pattern. Do you know what it is? A virus. Human beings are a disease, a cancer of this planet. You're a plague and we are the cure."

<http://www.imdb.com/title/tt0133093/quotes>

and crowned them with glory and honour.
You made them rulers over the works of your hands;
you put everything under their feet.” (Psalm 8:5-6)

Seen through the lens of the Hellenistic ‘Great Chain of Being’ [Glacken 1967, 198-199; Santmire 1985, 50, *passim*], this locates humans hierarchically above nonhuman creatures. Habel alleges, “Earth is depicted as a slave prostrate at the feet of human royals” [Habel 2009, 67]. Psalm 8 has, understandably, often been used to bolster a dominionist interpretation of Genesis 1-2 [Vantassel 2009, 36, 39, 163].

Yet, whilst Psalm 8 is undeniably functionally anthropocentric insofar as it portrays humanity as central to God’s purposes and in a position of regal power over creation, what is remarkable is the accompanying emphasis on humanity’s cosmic insignificance and utter dependence:

“When I consider your heavens, the work of your fingers,
the moon and the stars, which you have set in place,
What is mankind that you are mindful of them,
human beings that you care for them?” (Psalm 8:3-4)

Taken as a whole, Psalm 8 provides a sophisticated meditation on the ambiguity of human nature: a tiny creature in a massive universe and yet entrusted with extraordinary responsibility, and capacity for good or evil. It reveals an anthropocentrism which is carefully framed within God’s character and purpose for the whole created order. The primary focus of Psalm 8 as a whole is theocentric. Importantly, its descriptions of humanity’s exalted place are bracketed by identical opening and closing stanzas extolling the supreme majesty of God’s name throughout the created order: “Lord, our Lord, how majestic is your name in all the earth!” (Psalm 8:1, 9).

Thus, notions of hierarchy within God’s creation are given perspective by the subjection of all God’s creatures, human and nonhuman, before the Divine majesty. If this all-powerful God, before whose creation of stars and planets human beings are infinitesimally small, can voluntarily share power and responsibility with the human creature, what model of leadership, what nature of kingship, does that imply? Humanity’s privilege, with echoes of Genesis 1, is to rule over “all flocks and herds, and the animals of the wild, the birds in the sky, and the fish in the sea, all that swim the paths of the seas” (Psalm 8:7-8) but, as in Genesis, this rule is to reflect the character and beneficent rule of the God who has chosen humanity for this task.

Read within this theocentric framing, and in the light of all we have observed from Job and Psalm 104 (as well as in anticipation of New Testament concepts of kenotic service), Psalm 8 implies that humanity's leadership within nature should follow the divine model of self-giving love and compassion in relation to other creatures. Whilst Psalm 8 is clearly anthropocentric in a functional sense, it is thus by no means clear that it is teleologically anthropocentric. God's glory in Psalm 8 is expressed most fully when all creation thrives and is released to worship, and as humanity expresses God's character towards nonhuman creation.

Wisdom and Genesis in dialogue

This thesis proposes that biblical wisdom literature, particularly in Job, provides an invaluable lens through which to re-examine the relationship between humanity and 'wild nature', shifting the focus away from the anthropocentric narratives of western culture and the dominant theological tradition and, ultimately, more authentic to the complex witness of the biblical texts. Based on the material examined in this chapter, it is now important to turn again to the difficulties of Genesis 1-2. Seeing the Hebrew Scriptures as polyphonic, different parts of the canon will be allowed to comment on each other. Wisdom literature such as Job 10 and 37-41 and wisdom-influenced passages such as Psalm 104 become lenses through which fresh light may be shone on passages obscured by contested debate. In order to relate this composite canonical approach directly to the issues this thesis addresses, the key questions identified in the opening chapter will be addressed to Old Testament creation texts taken collectively, from Genesis and from wisdom and wisdom-influenced literature.

1. Why do we value wild nature?

There has been much debate within the conservation movement as to whether wild nature should be valued and protected for essentially anthropocentric and utilitarian, or ecocentric and intrinsic reasons. Is wild nature worthy of protection because of what it does for us, or for its own sake? The Genesis creation accounts have generally been used to support anthropocentric motivations for valuing nature. Of the two major streams of interpretation, the 'dominionist' or 'mastery' stream clearly sees nature as primarily subject to human interests, whereas the 'stewardship' tradition is characterised by a less utilitarian yet nevertheless functionally anthropocentric orientation, placing humanity in the position of benevolent autocrats. From the time of the Church Fathers an overwhelming anthropocentrism has been apparent, albeit often

cloaked in a theocentric cape: the world is fundamentally God's, but God has chosen to privilege humanity and place them at the centre of creation. Origen believed animals' only value related to their usefulness in resourcing, assisting or entertaining humanity: "The Creator, then, has made everything to serve the rational being and his natural intelligence. And for some purposes we need dogs, for example for guarding flocks ... or as house-dogs; for others we use beasts to carry burdens or baggage. Similarly, the species of lions and bears ... have been given to us in order to exercise the seeds of courage in us" [Quoted in Glacken 1967, 186]. Whilst the Reformers generally rejected the Hellenistic 'Great Chain of Being', its influence lingered. Calvin's commentary on Genesis 1 states that the creation of animals and plants was simply so that "none of the conveniences and necessities of life might be wanting" to human beings [Calvin 1965, 96, quoted in Clough 2012, 14].

However, when the Genesis accounts are read in the light of Hebrew wisdom literature, it is clear that such utilitarian teleological anthropocentrism is a distortion of the texts. Throughout the Hebrew Scriptures, the whole created world, human and non-human, belongs in its totality to God. Animals and humans alike are created and contingent beings, as God makes clear to Job in comparing him to the Behemoth ("Look at Behemoth, which I made just as I made you" 40:15). The book of Job follows biblical convention in proclaiming God's continuing ownership of the earth and all it contains (Psalm 24:1-2; Leviticus 25:23, Exodus 19:5). In these texts, as elsewhere in the Old Testament, Yahweh grants use of land and, within constraints, of creatures to humanity, but always retains ownership and oversight. As Sylvia Huberman Scholnick has observed, "Creation poetry makes clear that the Lord has never transferred title to any part of the universe he formed" [87, 191].

The consequence of God's creation and ownership of all things is that the source of all 'value' in creation is ultimately neither utilitarian nor intrinsic, but primarily contingent upon God's valuation. All of the Hebrew Bible's creation texts are resolutely theocentric including both those which delight in nonhuman creatures and those which appear to privilege humanity. Psalm 8 and Genesis 2 both make it clear that human beings, apart from God, are, respectively, cosmically insignificant (Psalm 8:3-4) and lifeless clay (Genesis 2:7a).

At one level, insisting that all value is contingent upon God appears problematic in addressing contemporary secular conservation debates. Theologically, it must be insisted upon. It provides a crucial alternative to the dualistic options of anthropocentrism and ecocentrism. It establishes that nature is not to be worshipped, as it is not itself divine, but that it must be treated with

wonder and respect as God's creation and possession. Yet, in discussion with those of more secular worldviews, it is also possible to speak theologically in a secondary sense of anthropocentric or ecocentric valuations of creation. This is because the Bible's indubitable theocentrism can potentially be expressed in derivatively anthropocentric or ecocentric outcomes. To clarify, whilst the world and its creatures may in absolute terms derive their value contingently from God, God may choose in a secondary sense to attribute greater or lesser value to particular aspects of creation. Thus, theologians such as Origen and Calvin, quoted above, whose statements appear entirely utilitarian in their valuation of animals would have claimed that it was God who ordained humanity as Lord of creation, exercising power and dominion over other creatures, and that God had created other creatures for human use. This theo-anthropo-centrism now needs to be examined in the light of biblical wisdom literature and a fresh look at the Genesis texts.

When we pose this possibility of theo-anthropo-centrism to passages such as Psalm 104 and the divine speeches in Job, as well as Proverbs' portrayal of God's delight in creation, we find it holds little weight. For instance, whilst Job and his companions habitually treat animals as satellites orbiting an anthropocentric world, yet to the author of the divine speeches (38-41) they are moral subjects, each uniquely fitted to its ecological niche, some threatening human interests, and others so independent that humanity's existence is irrelevant to them. Robert Gordis contrasts the divine speeches with Egyptian onomastica, noting that the creatures are not listed neutrally but celebrated intensely with pride and joy: "They are expressions of God's creative will and have been called into being without any reference to man's desires or needs, or even his existence" [Gordis 1985, 195]. Similarly, as we have seen, Psalm 104 portrays humanity as simply one amongst the many of God's creatures and, like Job 38-41, repeatedly describes creatures that are of no use to humanity and yet which matter profoundly to God.

Thus, in biblical Wisdom literature, animals and indeed the whole of wild nature are inherently valuable in the sense of being valued by God regardless of their significance for humanity. This attitude might be called 'theo-eco-centrism' in that what God values most is not the thriving of one species, but the thriving of the whole of creation together within a theocentric universe.

We then turn anew to Genesis 1 and 2 to search for clues for this theo-eco-centrism in these long-debated passages. Firstly, within the ordering of creation in Genesis 1:1-2:4, the imposition of a hierarchical 'Great Chain of Being' onto the Genesis text is mistaken. Humans are created on Day Six alongside all other land animals, emphasising their creaturely

commonality. The Sabbath, rather than humanity, is the true crown of creation (Genesis 2:2-3 [Moltmann 1973, 276; 1995, 31]), placing creation's value within God's theocentric purposes. Significantly, when God declares the whole creation *very* good, it is not because humans have been created, but rather an affirmation of the completion or fullness of "all that he had made" (1:31), including the rich biodiversity on earth. Furthermore, the poetic structure of Genesis 1:1-2:4 is not six progressively hierarchical days but rather three days of separation paralleled by three days of filling [Roehrs 1965, 320]. Overall, what we have is a strictly theocentric account of all creation, within which God celebrates the goodness of all creatures and shares creation's bounty with them. It is, in this sense, a truly theo-eco-centric account.

Secondly, both humans and other creatures alike have the 'breath of life' from God. The same Hebrew phrase, *nishmat chayyim* is used in Genesis 2:7 of Adam, and in 2:19 for the animals and birds which Adam names.

Thirdly, any interpretation of *imago Dei* stemming directly from the context of Genesis 1:26-28 must embrace humanity's relationship with other creatures: "the fish in the sea and the birds in the sky and ... every living creature that moves on the ground" (Genesis 1:30). Richard Middleton's *The Liberating Image* has made a detailed study of the context of the phrase, demonstrating overwhelming evidence of a background in ancient near-east royal ideology [2005, 59-60]. What is distinctive about ancient Israel's account is that it is "intentionally subversive literature" [ibid, 186], democratising Kingship to include the whole of humanity within God's temple-creation, and altering the nature of Kingship from self-aggrandisement into "generous, loving power ... used to nurture, enhance, and empower others, non-coercively, for their benefit" [ibid, 295]. Thus, humanity's role as *imago Dei* is not a licence to dominate and exploit but a responsibility towards nonhuman creatures, "actively mediating divine blessing to the nonhuman world" [ibid, 90].

Further clarity regarding humanity's nature is found in Genesis 2:7 which characterises the first human, Adam, as made from *adamah* or soil [Gregersen 2015a, 229]. To convey the Hebrew, Alter translates 2:7 as 'human' made from 'humus' [Alter 1996, 8]. Humans are creatures made both from 'the dust of the earth' and 'in the image of God'. We are carbon-based life-forms, like all other living creatures in our contingency and physicality, and yet uniquely called apart within the diversity of creatures, with a divine calling to reflect God's image in self-giving leadership within the community of creation.

In summary, when re-examined in the light of other biblical wisdom, Genesis 1 and 2 are finely-balanced narratives, emphasising humanity's commonality with other creatures and also drawing out the unique privileges and responsibilities incumbent on being human. Genesis 1-2, when read in the light of wisdom literature, do not portray a dominionist theo-anthropocentric world, where other creatures exist simply to serve human wants and needs. As Attfield summarises it, "The despotic attitude is a possible interpretation of the Old Testament only by means of selective quotation and disregard for Hebrew thought" [Attfield 1983, 26-27]. Rather, Genesis, along with the rest of the Hebrew Bible, demonstrates a theo-eco-centric ethic wherein God delights in creating and providing for all creatures, and humanity's vocation is to reflect God's character in assisting in the flourishing of the whole good creation.

Thus, Old Testament creation theology's answer to the question, "why do we value wild nature?" is firstly, because God creates, sustains and values it, secondly because it therefore has value independently of its usefulness or beauty to humanity and thirdly, because it is what we were made for. Human beings are created with responsibility towards nonhuman creation, making biodiversity conservation a missional task and a key means of reflecting God's image towards the whole created order.

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?

Biblical creation accounts have little to say directly as to whether value pertains to individual creatures or biological entities such as species. The question is a modern one, arising from tensions between science-based conservation, prioritising ecosystem flourishing, and animal rights philosophies concerned with the unnecessary suffering of individual creatures.

Although biblical accounts do not address this directly, it is legitimate to address the question to these ancient texts, so long as sufficient regard is taken to context and the hermeneutical horizons of authors, redactors and interpreters. It is noteworthy, for instance, that both the Genesis creation accounts and the divine speeches in Job seem to take account of the 'kinds' of creatures, a pre-scientific term which should not be conflated with any modern species concept (itself a contested term) but which nonetheless shows recognition of differentiation within nonhuman creatures.

In the Genesis 2 account, when the first human is invited to name the creatures to see if any should be a suitable companion, this is an act filled with significance. From a contemporary perspective it can perhaps be seen as the beginnings of taxonomy. Naming inevitably involves observation, distinguishing, comparison and classification and is thus proto-scientific. At the same time, naming is a culturally loaded action, placing nonhuman creatures within a world defined by human perception and language. Some commentators have seen Adam naming the creatures as an act of control and mastery, reading it in the light of the majority interpretation of ‘dominion’ in Genesis 1:28. Yet, as Wendell Berry points out, ‘dominion’ need not be interpreted as tyrannical dominance but rather, “it might be argued that the correct understanding of this ‘dominance’ is given in Genesis 2:15, which says that Adam and Eve were put into the Garden ‘to dress it and to keep it’” [1981, 268]. Theodore Hiebert goes further in arguing that “naming does not in and of itself represent the act of one in a superior position” [1996, 66] but rather, in the agrarian context of the Jahwist author, signifies humanity’s close relationship with, and dependence upon, animals. The perspectival and functional anthropocentrism within Genesis 2 turn out to be a humble, vocational anthropocentrism wherein “the human being is viewed more as an ordinary member of the community of life than as a privileged being set apart from it” [ibid, 66].

In fact, the context of this naming pericope, seeking a suitable companion for Adam, although it culminates in the intimacy of inter-human relationship, suggests the possibility of close companionship between humans and other animals. Thus, whilst in being named they were representatives of ‘kinds’ of animals, the creatures Adam named were also individuals with whom the possibility of companionship existed.

Further clues regarding humanity’s relationship with its fellow creatures as species or as individuals are found in the Hebrew terms *rādâ* and *kābaš* in Genesis 1:28, and ‘*abad* and *shâmar*’ in Genesis 2:15. Taking *rādâ* and *kābaš* first (as they are directly related to how humans relate to other creatures), they are traditionally translated as ‘rule’ or ‘have dominion’ and ‘subdue’. Both are strong terms, *rādâ* from a root that can mean to tread underfoot or subjugate and *kābaš* meaning to place one’s foot upon, with connotations of subjugation and even violation. It is therefore easy to see how commentators approaching the passage with preconceptions of human mastery find evidence to support their beliefs. However, both *rādâ* and *kābaš* have a broad semantic range so it is vital to look for evidence within the context of their setting in Genesis. John Rogerson argues, “If there is any way of ‘softening’ the

implication of these verbs, it must be by way of interpreting them in the context of the narrative structure of Genesis 1-9” [in Horrell et al, 2010, 25].

The context of Genesis 1:1-2:4 is that of a God who freely creates and repeatedly celebrates the goodness of each part of creation, proclaiming the totality ‘very good’. It is a world designed for interdependence and harmony, within which both humans and animals are provided with plants to eat. When God privileges humans by creating them in God’s image, the implication is that they are to reflect God’s moral character towards fellow creatures with which they share God’s breath of life. With this background, it is difficult to see how violent and domineering understandings of *rādā* and *kābaš* can be sustained. As Rogerson states, “Whatever they may mean in other contexts, in Genesis 1 they occur in the context of a non-violent world” [ibid, 26], in which a vegetarian diet prevails (Genesis 1:29-30). Rogerson reads Genesis 1 in the light of Genesis 9, where God only allows carnivorousness after the flood, and surmises that Genesis 1 should be seen as “a prophetic text” [ibid, 26] similar to the vegetarian visions of Isaiah 11 and 65, rather than as a description of origins. Read in this way, *rādā* could be interpreted as ‘shepherd’ or ‘steward’ (the semantic range includes pastoral and royal connotations [Lohfink 1982, 179]), and *kābaš* translated as ‘bring into shape’ or ‘put in order’.

The biblical ideal of a King was the shepherd-leader. The people of Israel were warned against royal tendencies to turn dominion into domination (1 Samuel 8:10-18). Thus ‘dominion’ should not imply licence for humanity to exploit fellow creatures. It is rather a calling to exercise responsible servant-hearted leadership within the community of creation. The vocation of those made in God’s image is to enable fruitfulness and productivity so that all God’s good creatures might flourish. This ‘shepherd’ or ‘steward’ leadership with its accompanying virtues of nurturing and protecting is not related to any proto-ecological concept of the significance of particular ‘kinds’ (or species) of living creature but rather appears to relate to the fact that these are living creatures, sharing the *nishmat chayyim* or ‘breath of life’ (Genesis 2:6, 19), which are therefore worthy of individual care and protection.

In Genesis 2:15, God calls Adam to ‘till and keep’ the garden of God’s creation. Sailhamer recognises the significance of this phrase in describing humanity’s purpose within God’s creation and argues that *abad* and *shamar* should be translated as to worship God and obey him, noting that the suffixed pronoun object of the verbs is female in Hebrew whereas ‘garden’ is male [Sailhamer 1992, 100-101]. However, God would be even less likely to be the feminine object of *abad*, and perhaps the most likely object within the ‘garden’ would be the *erets*, the

feminine noun for earth / land in Genesis 1-2. Both *abad* and *shamar* have a wide semantic range, the former encompassing work / worship / serve / keep, and the latter, maintain / take care / guard / watch over / preserve / keep. Within the context of humanity's creation from the earth and, in the Genesis 1 account, vocation to bear God's image, it is proposed that *abad* and *shamar* are best translated as 'serve' and 'preserve', conveying an understanding of the human role as one of gentle, sustaining leadership. 'Serving' the earth and its creatures can be seen as encompassing human endeavour in managing the earth and using its natural resources to encourage the flourishing of all creatures. It encompasses appropriate farming, animal husbandry, forestry, mining, hunting, fishing, trade and industry. Steven Bouma-Prediger states: "we are to serve and protect the garden that is creation – literally be a slave to the earth for its own good, as well as for our benefit" [2001, 74].

Similarly, 'preserving' or 'keeping' concerns treating natural systems and the creatures that inhabit them with restraint and respect. It has parallels with contemporary notions of sustainability, never taking from natural systems beyond their capacity to renew and replace. The biblical concept of preservation does not assume a static understanding of ossified nature but rather, in accord with modern notions of biodiversity conservation, incorporates dynamic engagement with ecosystems, maximising their fruitfulness in terms of yield and biodiversity. Serving and preserving are implicitly dependent upon good science, recording and studying natural systems and fellow creatures in order to understand our effect upon them, ensuring human needs and those of other species are met both now and for the future.

In summary, therefore, biblical creation passages place questions about the relative value of biological classes and individual creatures within a broader moral framework. God values all creatures, human and nonhuman. God's compassion towards all that God has made (Psalm 145:9), God's delight in the goodness of all creatures and the royal shepherding context of Genesis 1:26-28 suggest individual creatures are of great importance. Yet the divine enjoyment of diversity and of the varieties of creatures in Psalm 104, Job 37-41, along with the Genesis 2 call to name the creatures and to serve and preserve them also imply a proto-scientific importance to what we would today call biodiversity conservation. The biblical witness addresses the fractious divide between contemporary animal rights activists and science-based conservationists with a clarity that wild nature matters both in its diversity and in its individual life, and thus a philosophy of nature needs to be articulated which incorporates the value of both ecosystems and species, and also of individual creatures. That this involves difficult

judgments is of the nature of all wisdom's decisions in a compromised and complex world, and calls for ethical virtues that we will return to later in this thesis.

3. Can and should we put an economic price on nature?

As we have seen, wisdom literature challenges and reorients anthropocentric interpretations of Genesis 1-2. Influential extra-biblical concepts, such as the 'Great Chain of Being', have often placed humanity above all other creatures leading to strongly anthropocentric interpretations regarding humanity and creation. Such views, and the dominionist theologies of Vantassel and others, stand in sharp contrast to Job 38-39 and Psalm 104. God waters and cares for land and the species that depend on it, in places beyond both human knowledge and control. Gordis concludes, "The universe is not anthropocentric, but theocentric, with purposes known only to God, and which man cannot fathom. Man is not the goal of creation and therefore not the master of the cosmos" [Gordis 1985, 198-199].

The hierarchical anthropocentrism that has coloured biblical interpretation shares philosophical roots with western economic and scientific worldviews that have emerged since the Enlightenment. The biblical witness, that the world does not exist for humanity to use and abuse as it wishes, stands in tension with a dominant ideology that sees both inanimate objects and animate creatures simply as 'natural resources' for human consumption. Many conservation scientists are deeply concerned by the marginalisation of nature in political and economic discourse, and consequently have attempted to place an economic value on nature in the hope that it can then thus be incorporated into balance-sheets.

However, in the light of the biblical theo-eco-centrism that we have discerned, the conservation movement is on dangerous ground when basing the case for nature preservation upon economic arguments alone. Economic arguments for preserving wild creatures ultimately rely on the commodification of moral subjects created by God. Talk of 'ecosystem services' [Millennium Ecosystem Services 2005] and 'natural capital',¹³ however well-intentioned in communicating conservation values to economists and politicians, betrays assumptions that wild nature is only valuable in relation to humanity. Biblical creation accounts challenge such ethical anthropocentrism and declare the independent value of wild creatures, including those which are potentially threatening to human interests. Properly speaking, as argued earlier, the value of

¹³ The phrase 'Natural Capital' was first used in Schumacher, *Small is Beautiful*, 1973, but has been adapted to measure nature's value in purely economic terms.

wild nature (and indeed of human beings) is contingent rather than intrinsic, in that it rests in God's valuation. When speaking purely of *human* moral duties and virtues, however, wild nature and wild creatures can properly be spoken of as having intrinsic value, in that their worth is entirely independent of humanity's valuation of them.

Katherine Schifferdecker puts it thus, in relation to the Joban divine speeches: "A market-driven economy fuelled by consumerism views the natural world primarily in terms of how it can be exploited by human beings. To that consumerist culture, the divine speeches offer a radical vision. The speeches proclaim that ... there exist creatures and places that have an intrinsic value quite apart from anything to do with human beings" [2008, 129]. Gordis goes further, in using the language of animal rights: "If our understanding of the meaning of the Speeches of the Lord is valid, the Book of Job offers a religious foundation for the inherent rights of animals as co-inhabitants of the earth, adumbrated two millennia earlier than the emergence of secular ethics" [1985, 200]. All of nature matters and must be treated with the respect due to each of its parts. Wildlife conservation will always face a losing battle until humans learn their place amongst God's creatures.

4. What is an appropriate ecological anthropology?

The question of what it means to be human has, for Christians, often revolved around anthropocentric interpretations of *imago Dei* in Genesis 1:26-28. As this chapter has argued, this contested phrase, re-examined in the light of biblical wisdom and of its ancient near-eastern context, relates primarily to humanity's role amongst its fellow creatures. We are created in God's image in order to shepherd and guide (1:28), to serve and preserve (2:15) our fellow creatures. Thus, biblical anthropology is fundamentally ecological anthropology. Our guiding purpose as a species is to be found in how we reflect God's character in relating to what David Kelsey calls our "proximate contexts" [2009, 893], our human and nonhuman neighbours and the ecosystems that support them and us.

To interpret the relationship between humans and fellow creatures in any manner that instrumentalises or objectifies animals which share the divine gift of the breath of life, is not only to misread the text but to do violence to the divine word that proclaims all that has been made 'very good'. Thus, theologies of mastery and dominionism, whilst self-validating when selected texts are read through an anthropocentric filter, do not stand up to the witness of biblical creation texts as a whole. Rather, it is clear that *Adam* is created from *adamah* (Genesis 2:7),

human from humus, and that alongside the *imago Dei*, humanity requires the humility to see itself essentially as part of creation.

The steward motif has been both suggested and critiqued as an alternative to ‘mastery’, in exploring ecological anthropology. As long as it is used to position humanity amongst rather than above fellow creatures, stewardship can perhaps be a useful image, albeit freighted with unhelpful associations. Attfield argues, “the point of the metaphor is the steward’s responsibility and answerability, not the devaluation of the world which is their trust, and which is regarded as a reflection of the divine glory, and judged by its creator to be ‘very good’” [Attfield, 1983, 61]. As a term it has developed currency in secular as well as religious settings, with the nature conservation movement often asserting that humanity has a responsibility for the well-being of other species. William Adams quotes Lord Curzon, in 1906, describing conservation as “a duty to nature and the world” [Adams 2004, 96].

The radical message of Job qualifies and limits both ‘dominion’ and ‘stewardship’, in both cases implicitly as neither appears within it. Job questions the ability of humans to exert dominion over the most wild and mysterious animals, or to express stewardship of the whole of nature. Both individual animals and the whole creation, Job reminds us, belong to God alone and there can be no biblical expression of dominion or stewardship that fails to acknowledge God’s power and primacy.

This is not to deny that human work in wildlife conservation is important. Rather, our starting place in that work, and the values we bring to it, are re-imagined. Stewardship needs to commence with humility, in contrast to our habitual hubris. Job’s reaction to the astonishing overview of creation that he is given, is to repent of questioning God (Job 42:1-6). Knowing our place is to know how small we are, how incomplete our knowledge, and how wild and weird our fellow creatures are. It is theologically significant that all the species described by God in Job 38-39 are beyond human control. Kathleen O’Connor writes of them: “Each of these animals is unbounded, fearless and beautiful ... the text celebrates abundant, fecund life that needs no control” [O’Connor 2003, 175]. Job points to our need for a radical shift in our theological orientation, and a calling to be creaturely before attempting to become good stewards of the earth and its creatures.

Along with humility, human involvement with nature requires the virtues of fellow-feeling and respect. In the divine speeches, animals live independently of humans, with a direct relationship

to the God who created and sustained them. God has other creatures to care for besides Job, and their value is unconnected to their usefulness to humanity. Humanity is thus cut down to size, without being belittled as a subject of God's care. Rather, as Job accompanies God on his extraordinary wildlife tour, all life, including Job's, is seen as marvellous and mysterious. It is significant that senior voices within the conservation movement appreciate the importance of such fellow-feeling. Richard Mabey has said "Perhaps it behoves us ... to see ourselves not so much as managers or even stewards of the natural world, but as fellow-creatures" [1993, ix]. A creaturely ethic is badly needed in a world dominated by the over-confidence and anthropocentrism of technology and economics.

The human role in nature conservation, in the light of Job, is not to give up but to re-engage. Genesis 1-2 is not to be abandoned but reinterpreted. Schifferdecker argues that humanity should see its role, "not as one of dominion or control, but as one of participation and appreciation ... Adam is given responsibility to 'serve' and to 'keep' the garden (Gen. 2:15). Job is taught humility in relationship to the natural world. In our current environmental crisis, both biblical voices should be heeded" [2008, 131-132]. Gerald Janzen similarly integrates the Joban and Genesis themes: "If human lordship over the animal realm is part of the realization of the divine image, then the portrayal here of God's divine rule of the animals offers Job an opportunity to re-conceive himself in that image ... enticing Job into a transformed understanding of his vocation as lord of the animal kingdom" [1985, 241].

The connotations of superiority that have characterised centuries of dominion and stewardship theology need to be challenged by a different set of ecological virtues. Delight, wonder, humility, fellow-feeling and respect are needed if humanity is to re-imagine its role sufficiently to address the scale of today's ecological crises. Kathleen O'Connor captures this spirit in writing that the divine speeches "invite endless, joyous labor for justice for the earth and for all its wondrous, wild and creative creatures" [2003, 179].

Human involvement with wild nature must engage both imagination and emotions. In the divine speeches, God's depiction of wild creatures contrasts with that of Job and his companions in the divine enjoyment of creation in its beauty, mystery and diversity. If the majority of the book of Job is dark and despondent, the divine speeches stand out as playful, joyful and hopeful. God's self-evident delight in the strange creatures he introduces to Job calls forth a similar response from human beings. O'Connor writes, "God challenges Job to recognise his participation in the beauty and wild freedom of creation and its Creator" [2003, 177]. Similarly,

Schifferdecker: “The divine speeches articulate God’s delight and pride in a world full of wild and beautiful things, and they call human beings to take such delight in the world, too” [2008, 128].

Bill McKibben, who comments on Job as an environmentalist, writes, “Not only are all these things mighty and inexplicable and painful, but they are unbearably beautiful to God. They are right. They should brew in us a fierce and intoxicating joy” [1994, 43]. The implication for nature conservation is not to be afraid of evoking subjective pleasure regarding nature. Richard Bauckham states, “People feel that it is simply good that such creatures exist, even if they never encounter them themselves. People have a gut sense of what a loss it would be to the creation if such magnificent creatures went extinct” [2011, 221]. Whilst conservation biology should be scientifically rigorous, the practice of nature conservation needs also to engage the affective and imaginative dimensions.

There are implications for both theology and conservation. Biblical wisdom reminds the reader that context is fundamental to conclusions. If theology or conservation science are immersed in literature predicated on centuries of anthropocentric assumptions, or in discussion with those who share similar preconceptions, there is an inevitable danger of repeating past mistakes. Bauckham describes the divine speeches as “a powerful antidote to the hubris engendered by an arrogant and exaggerated view of ourselves as wielding some kind of godlike sovereignty over the rest of God’s creation - as though it were our creation, not God’s” [2011, 9]. Job challenges us to realise that theology and science need not only the academy but also the vastness, variety and mystery of nature. They need wonder, affective appreciation, and imaginative engagement if they are to be attentive to the needs of a complex biodiverse planet. The divine speeches in Job are the longest passage about non-human creation in the Bible, and they should be read meditatively and imaginatively. Perhaps Job is best read in the context of personal experience of the existential otherness of wild nature.

Job provides a vital antidote to either creation theologies or secular views of nature which excuse unbridled human exploitation of the natural world and abuse of fellow creatures. Gordis accurately sums up the implications of Job: “Though the poet did not intend to present a religio-ethical basis for ecology, he has in effect done so. Man takes his place among the other living creatures, all of whom are the handiwork of God and have an equal right to live on His earth” [1985, 199]. Bauckham adds, “for addicts of domination and excess the book of Job offers a healing and transforming vision of both the Creator and his creation” [2010, 38]. The call to be

radically non-anthropocentric is far more than a theological nicety. It is a vital necessity that human beings learn to find their place once again alongside the wild beasts.

Conclusion

The book of Job is generally acknowledged to have arisen at a time of crisis, quite probably in reaction to the trauma of exile [Terrien 1990, 240]. Today humanity, along with earth's other inhabitants, faces multiple ecological crises which threaten to overwhelm it. David Ford argues that the essence of Job is of theology in the light of "a tear in a tradition" [2007, 152], a psycho-social trauma so profound that it calls all previous theological approaches into question. Ford develops this in terms of theological reflection on the prose and poetry elicited by the Holocaust (*Shoah*), and elsewhere to interfaith engagement, but it may equally be appropriated in terms of current environmental crises. Ford advocates three key stages: reworking core elements of Christian thought, engagement with aspects of modernity, and dialogue with other faiths [ibid, 152]. This chapter's analysis of Job in relation to other biblical creation narratives has begun the process of such a fundamental reworking for human approaches to wild nature. Christian thinking needs to move from the anthropocentric to a form of theo-eco-centrism, wherein humanity plays its particular part in work and worship alongside other creatures which have independent significance to God. In terms of modernity and post-modernity, the ruptures between science and theology need to be overcome if wisdom for a sustainable world is to be acquired. Finally, this needs to be done in an inclusive way, incorporating the diverse insights of world faiths and non-religious belief systems.

Biblical wisdom literature, and in particular the book of Job, insists that, epistemologically speaking, all human knowledge is tentative, partial, and complex – including in both theology and science. The book of Job offers a profound challenge to systematic attempts at constructing a single theological or scientific metanarrative. The emptiness of conventional sapiential responses to Job's suffering undermines all human attempts to fully explain God's actions in creation. The divine speeches also mock Job's comprehension of the natural world. By repeatedly interrogating his understanding of everything from mountain goats to monsters of the deep, God questions any human overconfidence in explaining reality. God's initial question to Job, "Who is this that darkens my counsel by words without knowledge?" (Job 38:2), stands in judgment on both 'God-talk' and scientific hubris.

We inhabit a world where greater scientific understanding has delivered many benefits in terms of health, wealth and convenience, but has often failed to engender greater happiness for humanity or greater flourishing for fellow creatures. The book of Job calls for a fundamental ethical reorientation in attitudes to other creatures, and consequently in how humanity uses science, technology, and economics. Job questions human endeavour that is overconfident and hubristic. As Bauckham states, “We need the humility to recognise the unforeseeable risks of technology before we ruin the world in pursuit of technological fixes to all our problems. We need the humility to know ourselves as creatures within creation, not gods over creation, the humility of knowing that only God is God” [2010, 46].

CHAPTER 3

COVENANT AND LAND

If a biblical approach to the conservation of wild nature is to be comprehensive, it needs to engage with the place of nonhuman creatures in all the central themes of canonical scripture. Having examined ‘creation’ as the first of four broad themes which together encompass God’s initiatives towards his creation within the Christian scriptures, we turn secondly to the theme of ‘covenant’ as divine initiative towards humanity and the wider created order. The key proposal of this chapter is that the Noachic Covenant plays a paradigmatic role in establishing that God’s Covenantal purposes incorporate all creatures, with ancillary evidence of this in later Covenants.

Covenant and Land

The importance of divine covenant within the Hebrew Bible is undisputed. According to Eichrodt, covenant is *the* overarching theme of the Hebrew scriptures and the organising principle around which Israel’s religious life was shaped [Eichrodt 1961]. However, what has often been overlooked is that major biblical covenants are not only bilateral agreements between Yahweh and humanity (Noah, Abraham, Israel) but tripartite promises in which nonhuman creation (earth, animals, and the land of Israel) are partners alongside humanity and Yahweh. It is, therefore, crucial to establish this wider creational dimension of biblical covenants, before looking in detail at the covenantal place of animal life.

Generations of 19th-20th century biblical scholars approached the Old Testament primarily as an historical account of God’s relationship with Israel. Influenced by the epistemological assumptions of Enlightenment thinking, major theologians including Eichrodt, von Rad and G. E. Wright emphasised the historical development of Old Testament religion through the ‘mighty acts of God’ in salvation history (*Heilgeschichte*), and largely ignored the ecological importance of the land and creatures with which Israel shared it. Today, however, as Perdue observes, “The simplistic view of history and creation as mutually exclusive, long advocated by earlier generations of theologians, is properly discarded for any correct understanding of the Old Testament and contemporary faith” [2005, 342].

The centrality of land and creation within Old Testament covenants now has wide scholarly acceptance, although this has yet to permeate effectively beyond the academy. In his important

monograph, *The Land: Place and Gift, Promise and Challenge in Biblical Faith*, Walter Brueggemann argued that, “land is a central, if not the central theme of biblical faith” [2002, 3]. Gerhard von Rad admitted as much in his later writing, pointing out that, of forty-six promises made to the Patriarchs in the first six books of the Old Testament, twenty-nine are largely or exclusively about land and only seven contain no reference to land [1966, 79-80].

Brueggemann’s thesis is that “Israel never had a desire for a relation with Yahweh in a vacuum, but only in land” [2002, 200]. He points to three key movements within the Hebrew Bible, wherein the relationships of God, people and land are deeply interwoven:

1. From landlessness (Egypt) to promise of land (Abraham).
2. From landedness (Israel) to exile.
3. From exile to landedness (the restoration under Ezra and Nehemiah).

As Brueggemann argues elsewhere [1997, 102-113], it was the hegemony of classical, scholastic and Enlightenment attitudes which prevented generations of interpreters from taking seriously this key theme of the Hebrew scriptures. Furthermore, many Christian theologians have read the Old Testament through the lens of the New, seeking fulfillment of all Old Testament promises in Christ. Replacing Israel with the Church meant that references to ‘land’ within ancient covenants were reinterpreted in exclusively spiritual terms. Land became a metaphor for a relationship rooted in God (as in Psalm 1) and fulfilled in eternity.

Similarly, the development of historical criticism in the 18th-19th centuries, fuelled by Enlightenment rationalism and scepticism, tended to read the Old Testament through a lens of “evolutionary developmentalism” [Brueggemann 1997, 11]. Claiming objectivity, this approach imposed rationalist assumptions, relegating references to creation, land and fertility (particularly the Old Testament’s habitual personification of land) to ‘primitive’ religion, whilst only more ‘rational’ ethical and social developments were taken seriously.

What is beyond dispute is that God’s covenantal promises in the Old Testament concern nature as well as humanity, Promised Land in addition to chosen people. To see the Hebrew Scriptures simply as a historical narrative fails to recognise that creation, alongside Israel, remains God’s ongoing project. Just as Genesis 1 concerns the creation of both time and space, so the Old Testament describes a God at work in both history and creation, in culture and nature. Thus, in

recognition of the need to reassert the integral importance of creation within the Old Testament covenants, this chapter is entitled ‘Covenant and Land.’

Old Testament Covenants

The term covenant (Hebrew *b’rit*) appears over 270 times in the Hebrew Bible, and is related to the widely-observed Ancient Near Eastern custom of the formal making of a treaty or alliance between two or more parties [Nicholson, 1986; Marshall et al. 1977; Kline, 1963]. This was usually sealed through the ritual sacrifice of an animal (*karat b’rit*, to ‘cut’ a covenant) which was then shared between the parties or, in the case of a covenant with a deity, burned in sacrifice and eaten [Kline 2006, 1-6]. Within the Hebrew Scriptures, covenants between Israel and Yahweh have particular meaning and importance, although there are also numerous other individual and national covenants.

The first biblical use of explicit covenant language is in the account of Noah (Genesis 6:18, 9:8-17), although some argue for earlier pre- and post-lapsarian Edenic and Adamic covenants [Horton 2006, 82-86; Scofield 1909, 6]. Taking the two Genesis creation accounts together, there are elements common to other biblical covenants in terms of divine initiative, promise, command and expectation. God entrusts humanity with the divine image and its accompanying responsibilities towards other living creatures (1:26-28, 2:15). God also promises to nurture human and animal wellbeing through the provision of plant life. At the same time, God puts parameters around human behaviour, requiring obedience and describing the consequences of disobedience (2:16-17). However, Genesis 1-2 cannot strictly be seen as covenant due to the absence of the definitive term *b’rit*, of contractual language, or of sacrificial confirmation. If covenant is characterised by divine gift and promise, there is an equal case to be made for a creational covenant between God and all living creatures, specifically the promise of every green plant to provide food for “everything that has the breath of life in it” (1:30).

It is only in the Noachic covenant that we encounter the full biblical understanding of Yahweh’s covenantal promise [Busenitz, 1999]. In Genesis 6:18 the term is used for an apparently individual covenant between Yahweh and Noah, since Noah’s wife and family are mentioned separately. However, Yahweh’s purposes in judgment and redemption are described as towards ‘all people’ (6:13), ‘all life’ (6:17), ‘everything on earth’ (6:17), and ‘the earth’ itself (6:13), so this is a personal covenant with universal relevance. God’s redemptive purposes in the midst of universal judgment involve a unique human agent (Noah), within a much wider divine purpose

which encompasses the whole created order. Moreover, the language of Genesis 6:13 implies covenantal intent ('I will establish') rather than the actualisation of the covenant relationship.

The covenant is ratified after the deluge and the safe arrival of the ark's human and non-human passengers, with Noah's sacrifice and God's promises confirmed in the sign of the rainbow (8:15-9:17). This whole passage encompasses a covenantal process of divine initiative and promise, accompanied by, although not conditional upon, human response. For the purposes of this thesis, there are several elements of the flood narrative and subsequent covenant that merit theological consideration:

- God's purposes in bringing judgment upon non-human species and the earth itself, despite humanity's responsibility for the earth's corruption.
- God's redemptive purpose in including creatures of every kind within the ark.
- The 'problem' of animal sacrifice within the covenantal system, with regard to a conservationist ethic. This will be considered later in relation to the Levitical and Deuteronomic sacrificial codes.
- The relationship between the Noachic account and the Genesis 1-3 creation narratives regarding humanity's place in relation to other creatures in ante- and post-diluvian contexts.
- God's purposes in the inclusion of all species and the earth itself within the Noachic covenant, and subsequent implications for the human treatment of animals.

Why judge animals for human sin?

According to James Nash, Genesis 6-9 is "morally distorted" [Nash 2009, 218]. He argues that God is unjustified in destroying the vast majority of animals, "for an anthropocentric purpose: to punish human wickedness" [ibid, 218]. Similarly, Habel sees the Noah account as one of a number of 'grey', rather than 'green', biblical texts, arguing that God's judgment of the whole earth on account of human sin shows that, "All living things are apparently disposable, just a part of the human experiment" [Habel 2009, 13]. He further alleges that God's destructive judgment is no better than the human violence that has corrupted the earth and thus, "God completes the corruption process" [ibid, 16].

Nash and Habel both focus on the suffering of innocent nonhuman animals. Their critique could potentially be answered by arguing that animals are morally culpable. David Clough discusses

this at length [2012, 105-119], concluding that biblical texts are ambiguous, but some Christian traditions and scientific studies of primate behaviour suggest the possibility of animal sinfulness. His conclusion is that, “there seems to be no good theological grounds for believing that human responsibility for actions before God is discontinuous from the responsibilities of other creatures” [ibid, 119]. However, given the relative novelty of this proposal in mainstream theology, and the biblical pointers to animals as examples of devotion and obedience for sinful humans to emulate (Job 12:7-10; Jeremiah 8:7), the case must remain unproven.

More significantly, Nash and Habel anachronistically impose a contemporary ecocentric ethical value matrix upon ancient texts, thereby constructing an unhelpful polarity between ecocentrism and anthropocentrism. Observed exclusively through a contemporary ecocentric lens, Genesis 6-9 careers unevenly between extremes of anthropocentrism (God’s judgment of animals; Noah’s sacrifice of animals; divine permission to eat meat) and ecocentrism (the inclusion of all species upon the ark; the covenant with all living creatures). Only when the text is recognised as profoundly theocentric can it be read as a consistent whole within which both human and non-human creatures are placed within God’s overarching purposes.

Thus, when Genesis 6:5-21 is read as part of a wider account of God’s purposes in creation and salvation, a clear pattern may be discerned. From the divine perspective, human ‘wickedness’, ‘violence’ and ‘corruption’ have wider consequences. The narrative describes how the alienating and polluting consequences of sin spread outwards from Adam and Eve (Genesis 3) to a situation where, “every inclination of the thoughts of the human heart was only evil all the time” (Genesis 6:5). Thus, the cause of the problem lies exclusively within the human species. Yet the text also states three times in Genesis 6:11-13 that the ‘earth’, and by implication the species it contains, has become corrupted because of humanity. Clines points out the deliberate contrast between the repeated ‘good’ applied to creation in Genesis 1 and the repeated mention of earth’s corruption in Genesis 6 [1972, 128-142].

Unlike contemporary individualistic notions of justice, the Hebraic worldview in Genesis is more complex, interdependent and fluid. Recent understandings of ecological systems parallel this more than Enlightenment ideas about individual rights. In ecological systems, the actions of one species have inevitable consequences upon all others within an ecosystem. As Genesis 3 makes clear, the sinful acts of human beings have inevitably destructive results for their relationship with the land and its creatures (3:17-19) as well as with God. Sin is a form of pollution distorting all the relationships in an ecological network, and thus for God to deal with

it necessarily involves radical action at a systemic level. Whereas Nash and Habel may (contra Clough) be correct in seeing animals as innocent victims, animals are nevertheless infected by sin's consequences, and therefore God's intervention inevitably affects them.

It is also instructive to compare the biblical flood account with Ancient Near Eastern deluge stories such as the epics of Gilgamesh and Atrahasis [Arnold and Beyer 2002]. In these accounts, devastation through flooding results from quarrelling amongst gods, or due to the whim of a capricious deity. In contrast, the biblical account presents God as motivated by an abhorrence of sin and corruption within creation. As Clines says, "In the Hebrew setting the Flood is an expression of His [God's] will and activity. He alone is responsible for the catastrophe; thus any ideas of inter-divine conflict or mere chance are negated" [1972, 137]. Thus, Genesis 6 focusses on divine holiness and purity, leading to the destruction of innocent creatures as a consequence of human evil. Yet, typically in the biblical narratives, God's righteous judgment is held in check by God's love for all that God has created, leading to the call to Noah to build an ark.

Thus, within a theocentric framework the apparent inconsistency of God's destructive judgment and God's contrasting desire to rescue a remnant of each species is resolved. Within the ark of salvation, God provides an opportunity for creation to begin again, cleansed from the corruption of human sin.

Why include representatives of every species within the ark?

We turn next to the theological implications of God's explicit desire to include representatives of every living creature within the ark. God's instructions regarding the ark's proportions and scale are directly in relation to its envisaged passengers. Only eight human beings are included (Noah, his three sons, and each of their wives) alongside representatives of all nonhuman creatures. The account repeatedly requires room for every kind of animal, bird, and creature that moves along the ground, following the classification of Genesis 1 (Genesis 6:19-20, 7:2-3, 8-9, 14-16).

The purpose of ensuring that nonhuman species survive is not to benefit Noah and his family. The text is theocentric rather than anthropocentric in this regard. Nowhere is the continuance of biodiversity (to use a contemporary term) related to the usefulness of animal-kind to humanity. Rather, Noah (representing humanity) is called implicitly to preserve biodiversity for

God's sake. Whilst no explicit reason for saving nonhuman creatures is given, on three occasions the text implies divine intent. In 6:19, Noah is instructed to bring two of every creature, "male and female, to keep them alive with you", and in 7:3 "to keep their various kinds alive throughout the earth". Finally, once the voyage is complete and dry land has reappeared, God commands Noah to bring all the creatures out of the ark "so they can multiply on the earth and be fruitful and increase in number on it" (8:17).

These references provide a clear emphasis on breeding pairs and the continuance of life. It appears that all species, remarkably including those regarded as ritually unclean (7:2), have a value to God independently of any value they have to humanity. Not all were suitable for sacrifice or companionship, and some were taboo or dangerous to humanity. None were allowed for food, as humanity was still vegetarian until after the flood. There was no reason for Noah and his family to protect these creatures except God's direct command. In God's desire for the full range of species to continue and 'multiply' beyond judgment there is also clear reference to the Genesis 1 creation account, where it is the 'fullness' or completion of creation that is proclaimed 'very good' (1:31). There is, it appears, a sense in which the sum is greater than the constituent parts and the goodness of the world depends on a plenitude of species and an abundance of wildlife. God's blessing is seen in what we now call biodiversity, and in the fertility and flourishing of all creatures.

Why sacrifice animals?

Once the creatures are safely aboard the ark, the text moves rapidly towards its redemptive conclusion followed by Noah's sacrifice of thanksgiving to Yahweh (8:20-22). This is the beginning of a sacrificial system developed in later covenants, which will be considered in more depth later. Looking specifically at Genesis 8-9, an initial reading suggests an apparent inconsistency between the divine desire to preserve and protect animal-kind and the divine pleasure in sacrificial offerings.

Again, however, the hermeneutical key is to read the passage theocentrically. All life, human and animal, is created by God, belongs to God, and will return to God after death. Schochet emphasises that animal sacrifices, rather than demonstrating humanity's exploitative power over animals, actually demonstrate the common life that they share: "Paradoxically, the sacrificial rites and restrictions actually emphasize man's kinship with the animals he sacrifices, and bring to the fore the elements which he shares in common with them" [1984, 46]. The

substitution of animal sacrifice for human culpability for sin demonstrates a relationship of moral equivalence, however uneven. Only something of great value before God and humanity could provide an alternative sacrifice. Moreover, the taking of animal life within the sacrificial system is an act of such moral and theological significance that it cannot be contemplated except in the immediate context of God's ownership and oversight of all life.

How different are the worlds of Adam and of Noah?

In Genesis 9:2-3 God declares that the 'fear and dread' of humanity will fill animal-kind and that animals and birds are 'given into' human hands for food. This revisits the Genesis 1 account in the light of a world judged because of human sin. Clines remarks that, "The creation ordinances remain, for this is still God's world, but they do not remain unchanged, for this is a world where sin has become permanent" [Clines 1972, 138]. There is a new pragmatism about the relationship between humankind and animal-kind in Genesis 9:1-2, recognising the inevitability of death, suffering and power relationships in a less-than-ideal world. This postdiluvian world is, in one sense, necessarily more anthropocentric given that humanity now has power over the rest of created life. Yet, there are divine constraints upon the human use of animals. God proscribes the eating of meat with blood in it, signifying that the life-blood belongs to God (9:4).

The text also clearly envisages a world with space for both human and animal-kind to thrive, since the encouragement to be fruitful and multiply remains both for animals (8:17) and humanity (9:7). Even James Nash, otherwise dismissive of the Bible as a basis for biodiversity protection, admits, "Despite moral ambiguities, these narratives recognize the interdependence of organisms – we are saved together! – and suggest that the Creator's purpose is to provide a living space for all creatures to share. ... The divine promise here implies human obligations to other species, because fidelity to God entails loyalty to God's covenants" [2009, 218].

Importantly, the relationship of fear and power between humanity and other creatures in Genesis 8-9 is a consequence of a damaged world of imperfect relationships, unlike that of Genesis 1:1-2:4a. John Rogerson suggests that, rather than describing a historic paradisaical beginning from which humanity has fallen, Genesis 1 is, "a prophetic text, describing an ideal that is not realized in the world of actual human experience" [2010, 26]. If, as many scholars believe, Genesis 1:1-2:4a was written, or at least edited, in an exilic context when God's promises in history and nature appeared insecure, the creation accounts provided an

extraordinary reassurance that, despite appearances, the universe is ordered, purposeful, generative and most of all ‘very good’. For Israel in exile the repeated retelling of the story of creation was not so much a story of origins but, “a concrete life-and-death discipline and practice” [Brueggemann 1997, 533]. Thus, if Genesis 1:1-2:4a was the ideal, then Genesis 9 presents the real world of human experience, where apparently exploitative power-relationships between humans and animals are permitted within divinely set constraints. The Noachic Covenant provides checks and balances to fallen humanity’s anthropocentric tendencies, circumscribing the human use of animals within a reaffirmed theocentric covenantal worldview wherein all creatures exist to flourish for the glory of God.

What are God’s purposes in the rainbow covenant with all creation?

In the Noachic account, humanity’s power over other creatures is placed within God’s overarching covenant purpose inaugurated with a rainbow. What is remarkable about this foundational covenant is that it explicitly encompasses all life on earth. During the course of Genesis 9:8-17, Yahweh repeats this point six times. God’s covenant includes not only Noah and his descendants but ‘every living creature on earth’ (9:11, 12), ‘all life on earth’ (9:17), and even, categorically, ‘the covenant between me and the earth’ (9:13).

Once again there are references to Genesis 1, not only in the fact of God’s care for every part of creation, but in the specific use of the rainbow. Whilst Wellhausen and others have seen the rainbow as indicating an upturned warrior’s bow, this has little or no obvious connection with the theme or symbolism of the passage [Westermann 1988, 66]. A more convincing interpretation references Genesis 1:6-8’s description of a *raqia*, in Hebrew cosmology a gleaming metallic firmament or dome over the earth upon which God’s throne rests. The rainbow is thus a sign that God is enthroned above the heavens, ruling justly over every aspect of creation [Turner 1993, 122]. Clines links the Genesis flood narrative and creation accounts within God’s overarching creational intent: “In spite of human sin and violence, God has committed himself to His world; the unconditional covenant of the rainbow, by which He binds only Himself, is sign of that. The story of the Flood is therefore an affirmation of the story of creation, and speaks ultimately not of divine punishment but of God’s faithfulness to the works of His hands” [1972, 140].

The implications of the Noachic covenant are of enormous significance for several key Christian doctrines. With regards to soteriology, Genesis 6-9 makes it clear that God’s saving

purposes encompass not only human beings but, at least in representative form, all living creatures. With reference to eschatology, God's covenant 'never again' to visit such drastic judgment incorporates nonhuman creatures and the earth itself, implying God's future intentions for all creation also incorporate hope beyond judgment.

However, for this thesis, it is the Noachic covenant's implications for humanity's attitude to wild nature that need exploring in depth. As the first explicit biblical covenant, it undergirds Yahweh's covenants with Abraham, Moses and the people of Israel. Later covenants build upon rather than replace God's promises through Noah. The Noachic covenantal promises towards nonhuman animals are both universal and everlasting. The words 'never again' are repeated (8:20; 9:11), and God states definitively that it will be an "everlasting covenant between God and all living creatures of every kind on the earth" (9:16).

God's purposes of blessing, fecundity and goodness in creation are to be continued throughout all time, across the created order, and encompassing all creatures, whether those of use to humanity (in sacrifice, food, labour, or clothing) or those irrelevant or harmful to human flourishing. The everlasting covenant provides a profound reorientation of humanity's ethical engagement with fellow creatures. Alongside the creational vocation to model godly leadership towards other creatures (Genesis 1:26-28), there is a new orientation to cooperate with a God whose ongoing commitment to the flourishing of all creatures is manifest within a damaged post-diluvian world.

Seen in this light, Noah is God's co-worker. As a representative human, he is implicated in the judgment of the flood, yet, as a righteous person (6:8, 7:23, 8:1), he helps prevent a more devastating judgment. Noah's righteousness may even be connected to his behaviour towards non-human creatures. This is how Philo and some rabbinical writers interpreted the passage, seeing Noah's patient, humble service of animals and their needs within the ark as key to his righteousness [Lewis, 1968, 50-51, 122, 145]. Commenting on this, Norman Wirzba writes, "Noah is righteous because like God the creator he took upon himself the maintenance of all creation. The ark experience was really a training ground, a laboratory of sorts, in which righteousness could be learned and displayed" [2003, 33].

Humanity's vocation within God's world is thus deeply interconnected with the flourishing of nonhuman creatures. Whereas, in Genesis 3, the first humans failed to bear God's image by reflecting God's character towards their fellow creatures, now, as creation begins afresh,

Noah's righteous relationship with God, demonstrated in caring for animal creation, is paradigmatic for future human behaviour. Noah stands as a model for an ecological anthropology in the 'serving and preserving' (Genesis 2:15) of fellow creatures.

The tripartite covenant between God, humanity and the rest of creation is symbolised by the rainbow, a regular reminder to agriculturalists of their dependence upon God for rain and fertile land. Theodore Hiebert has traced how the construction of altars by Noah, and later by Abraham (12:6-8; 13:18) and Isaac (26:25), all "serve to establish the enduring relationship between the descendants of the Yahwist's heroes and the arable lands they inhabit" [Hiebert 1996, 109]. All are beside a large tree, mountain or water source, key features of the land and symbolising humanity's dependence upon it.

The Noachic covenant demonstrates the value of animals as not instrumental, but contingent on God's valuation of human and nonhuman creatures. This has major implications for contemporary attitudes to biodiversity conservation. As Richard Bauckham puts it, "As creatures of God, the creatures are literally priceless, and we degrade them by putting a price on them" [2011, 232]. Thus, purely economic arguments marshalled in the service of biodiversity conservation are ethically and theologically problematic and lead inexorably towards the commodification and instrumentalisation of animals. In a globalised market economy, where price and value are conflated, the authors and editors of Genesis would undoubtedly see putting a price on nature not only as fundamentally mistaken but also as morally dangerous.

Furthermore, the command to both human and animal-kind to multiply, be fruitful and increase (Genesis 8:17, 9:1), suggests God intends the earth and its resources to be sufficient for the needs of both. God's covenant with all creation means that, so long as humans live within the limits that righteous living dictates, the earth will provide for all of God's creatures. To put it simply, the Noachic covenant implies that the ark of planet earth is furnished with all that is needed for biodiversity to thrive. Anything which threatens the earth's potential to provide for the needs of all, militates against God's covenant promise and breaks the bonds that bind humanity, God and nature. Thus, directly contradicting those natalists¹⁴ who prioritise human multiplication and ignore God's desire for all creatures to be fruitful and increase, the Noachic covenant challenges both human overpopulation and human overconsumption of earth's finite

¹⁴ Christian natalism advocates large families based on literal interpretations of the Genesis command to "be fruitful and multiply" [McKeown, 2014].

resources. As Bauckham argues, “The covenant secures the earth as a reliable living space for all the creatures of earth ... We have no right to evict other members of the community from the home God has given us all to share” [2011, 224]. If, by overconsuming earth’s resources, humans drive towards extinction species with which God has made an everlasting covenant, God’s purposes for creation are directly contravened.

The Place of nonhuman creation in later Old Testament Covenants

Much Jewish and Christian interpretation assumes that the Abrahamic and Mosaic covenants exhibit a progressive narrowing of divine focus as compared to the Noachic covenant, respectively from nature to human history, from the whole creation to one species, and from the whole human race to the chosen people of Israel. Nonhuman animals appear largely as items for food or sacrifice and are marginal to a clearly anthropocentric narrative. Thus Schochet, describing Jewish interpretative traditions, states, “The animal serves merely as a backdrop or natural background behind the stage on which man, the principal player, performs his role” [1984, 9].

Schochet is representative of the dominant western tradition’s adoption of the ‘Great Chain of Being’. He summarises his perception of the biblical order thus: “At the apex stands God, the Lord of the earth. Beneath Him are His servants, the human beings ... The lowest rung is occupied by the animal kingdom” [ibid, 5]. This hierarchical language has evolved through Aristotelian and mediaeval Neoplatonic philosophy and has later echoes in Enlightenment rationalism, with its privileging of supposedly ‘objective’ human reason. The Hegelian emphasis on human history, which greatly influenced Old Testament studies, left little room for environmental factors or nonhuman actors in the biblical accounts: “Man is exalted above all else in the whole creation. He is something which knows, perceives, thinks” [Hegel 1962, vol. 2: 199]. The consequence was that western scholarship made the biblical text, in Brueggemann’s words, “subservient, at least methodologically, to the rational claims of the interpretive elite” [1997, 10].

Brueggemann sagely observes that biblical scholars of previous eras were simply children of their culture, successively influenced by Baconian science, Cartesian rationalism, Lockean empiricism and Hegelian idealism [ibid, 12ff]. It is, however, a salutary reminder that each generation, including this one, reveals its intellectual shortcomings in retrospect. Whilst perspective is unavoidable, it can be mitigated by avoiding hegemonic claims, by being aware

of one's ideological context and its potential distortive influence, and by entering into dialogue with thinkers from differing contexts.

Recent decades have seen a growing rediscovery of the importance of creation, in addition to history, within the Hebrew scriptures, particularly the Old Testament covenants. Von Waldow's essay, *Israel and her Land: Some Theological Considerations* [1974] paved the way for a major reassessment of the place of land and nonhuman creation in the Hebrew scriptures, drawing attention to two key concepts. The first was that all biblical covenants were about land as well as people, and the second was that covenant created a tripartite relationship between God, people and land. These ideas have been developed extensively by others including Walter Brueggemann [2002], C. J. H. Wright [1990; 2004] and Norman Habel [1995].

What made the people of Israel distinctive from other tribes and nations of the Ancient Near East, and allowed their ideological triumph over the polytheistic fertility cults of their neighbours, was precisely that they conceived Yahweh as God of *both* history and nature [von Waldow 1974, 497]. This made Yahweh far more than a tribal fertility deity. He was equally the God of time and place, the God who had accompanied their ancestors in Mesopotamia, Canaan and Egypt, and also the creator and owner of the land and its creatures, whose fertility and provision were closely linked to the people's relationship with Yahweh.

Furthermore, Torah, as the codified covenantal basis of Israel's self-understanding as God's chosen people, was inseparable from the ecology and agriculture of the Promised Land. Thus, in Deuteronomy 12-26, the Torah is given at the point of entry into the land. Its content, as will be discussed shortly, relates not only to religious and social matters but to farming practices, land ownership and, most clearly, to religious festivals interwoven with the seasons and fruitfulness of the earth. In von Waldow's words, "Not only is worship to Yahweh related to the promised land, but so is the entire law" [ibid, 505].

The Place of Land

The main term for land, *erets*, appears over 2,500 times in the Hebrew bible and has a broad semantic range, including the whole earth (eg. Genesis 1:1), soil or ground (18:2), personal land-holdings (Exodus 23:10-11], national territory (1 Samuel 13:19) and Yahweh's land (Jeremiah 2:7) [Church et al. 2011, 46ff]. There is also some overlap with *adamah*, the soil from which humanity (*adam*) is formed.

Yet, within the context of covenant, land has theological resonance far beyond its etymology. Christopher Wright states that, “The land itself will be both the arena and agent of God’s blessing or curse ... The land, in all its dimensions - promise, conquest, shared possession, use and abuse, loss and recovery - was a fundamentally theological entity” [1984, 48-50]. The land is an active partner alongside Yahweh and the Israelites in a tripartite covenant. The foundational Noachic account alternates between describing this third covenantal partner as “all living creatures” (Genesis 9:10, 12, 15, 16), the earth (*erets*) itself (9:13) and “all life on earth” (9:17), deliberately including wild nature within its understanding of covenant partner, and conflating earth itself with the life it sustains. In the Abrahamic and Mosaic covenants there is no explicit mention of wild nature in the institution of covenant, only of land itself but, as we will see, living creatures and wild nature continue to be part of God’s covenantal concern.

Land is thus far more than an inanimate object, a stage on which Israel acts out the drama of its relationship with God. It is, rather, an actor itself, a participant in the web of covenant living in relationship both with God and humanity. Richard Lowery speaks of how, “The earth has its own vocation to obey and worship God apart from its usefulness to human beings” [2000, 62]. Acknowledging Martin Buber, Lowery argues that Israel’s relationship with land was an “I-Thou” rather than “I-it” relationship, in that land was to be honoured and cherished as if it were a living being impacted by human behaviour.

The personification of land is a frequent feature of Hebrew literature. In Leviticus 18:25-28, when the people of Israel fail to keep the covenant the land (*erets*) is ‘defiled’ and reacts by ‘vomiting out’ its inhabitants into exile. In the Psalms, the earth can ‘shout for joy,’ ‘sing praises’ and ‘bow down’ before Yahweh (Psalm 66:1-4). The prophets go further, not only personifying land, but conflating *erets* with the community of living creatures it supports, echoing both the Noachic covenant of Genesis 9 and the creational vocation of humanity to demonstrate God’s character towards the earth and its creatures.

Thus, Jeremiah 12:4 echoes Genesis 1:26-28 as a de-creation account: “How long will the land lie parched and the grass in every field be withered? Because those who live in it are wicked, the animals and birds have perished.” Similarly, Jeremiah 14:4-6: “The ground is cracked because there is no faith in the land; the farmers are dismayed and cover their heads. Even the doe in the field deserts her newborn fawn because there is no grass. Wild donkeys stand on the barren heights and pant like jackals; their eyes fail for lack of food.” In compassionate language

towards the plight of human and animal alike, the prophet understands that the consequences of breaking covenant relationship have consequences for both land and wild nature.

Perhaps the most vivid passage conveying this association of barren land and suffering creatures is the legal indictment against Israel in Hosea 4:1-3. Due to the Israelites' lack of faithfulness and repeated sin, "the land dries up, and all who live in it waste away; the beasts of the field, the birds in the sky and the fish in the sea are swept away" (4:3). The Hebrew term translated 'dries up' (*te·'ē·bal*) literally means 'mourns'. The whole community of creation is affected by humanity's sin, causing death and distress both to wild nature and the land which nurtures it. Mays comments, "When the people of God break covenant, the whole creation suffers the consequences of their sin" [1969, 65].

Some commentators have seen evidence of 'primitive' anthropomorphic beliefs [von Waldow 1974, 503] in the Hebrew Bible's repeated personification of land, whilst others have sought to demythologise such texts. However, within the context of covenant, neither a mythological nor rationalised account suffices. Habel states "The land is personified, not as a goddess or mother earth, but as a kind of personal extension of YHWH, the owner of the land" [1995, 84]. Thus, whilst there is no direct etymological link between 'land' and wild nature in the Hebrew Bible, there is a deep connection through covenant theology, wherein people and God are bound in inter-related community with the land and its creatures.

Many commentators see the Hosea 4 passage as envisaging a future, rather than contemporary, ecological catastrophe [Weiser 1949; Boecker 1964; Kidner 1981; Mays 1969; Wolff 1974]. Kidner argues that, "with our new ability to make a desert of the world ... Hosea speaks here even more immediately to us ... than to his own generation" [1981, 48]. Perhaps it is not surprising, therefore, that in reaction to modern ecological excesses we find contemporary analogies to the Hebrew understanding of land and creatures as bound in interdependent relationship. The scientist James Lovelock's Gaia hypothesis adopts the language of Greek mythology to explain how organisms react with their surroundings to regulate earth's climate and atmosphere in a way that is beneficial for life [Lovelock and Margulis 1974]. Lovelock emphasises that he uses Gaia metaphorically, although it has been adopted by neo-Pagans.

Modern ecological insights have revealed the extraordinary complex interdependence of organic life-forms, water and soil. They are reminders that land (or soil) is never inanimate but comprised of billions of bacterial and microbial life forms. This understanding was commonly

(albeit, not scientifically) understood by generations of agriculturalists and pastoralists. It is therefore unsurprising that contemporary agrarian writers are amongst those who get closest to the Hebraic concept of 'land'. Aldo Leopold in his classic *Sand County Almanac* writes, "That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics" [1989, x]. Reading the Hebrew Scriptures, and particularly the covenantal literature, the concept of land as community resonates strongly. Land was never understood mechanistically or commodified but seen as sensitive, fragile, complex, and above all responsive.

Brueggemann's *The Land* has been highly influential in recovering the place of land across the sweep of Old Testament narrative, from landlessness, nomadic occupation, slavery, exodus, the gift and temptation of land, and exilic longing for land. He persuasively makes the case for the centrality of land in Israel's self-understanding, particularly for the Priestly writers in their exilic context. Brueggemann also demonstrates that the Hebrew scriptures do not contain one monolithic theology of land, but rather that the place of creation and land-use were contested. He draws a contrast between understandings of 'gifted land' (generative and nurturing yet tentative and fragile) in contrast to 'managed land', bearing the imprint of human (royal) control and manipulation [2002, 33]. The former may be occupied but never possessed fully as it remains God's, whereas the latter promises security but always fails to deliver it. In the period of Israel's occupation of Canaan there is therefore "a tension between royally secured land and covenantal precarious land" [ibid, 94].

Norman Habel, in *The Land is Mine*, identifies six separate 'land ideologies' [Habel 1995], respectively, a royal ideology (land as the source of wealth, seen in 1 Kings 3-10), a theocratic ideology (land as conditional grant; Deuteronomy 4-11), an ancestral household ideology (land as family inheritance; Joshua), a prophetic ideology (land as Yahweh's sacred inheritance; Jeremiah), an agrarian ideology (land as Sabbath-bound; Leviticus 25-27), and finally an immigrant ideology (land as an inclusive host; Abraham in Genesis 11-23).

Whilst Habel demonstrates the diversity of biblical attitudes to land across varying historical, political, theological and socio-economic contexts, he fails to demonstrate these as fully-fledged distinct ideologies. He also ignores further emphases within the biblical text, such as attitudes to wilderness (land as place of threat and enforced dependence), and Egypt (land as false security). Rather, during the Israelites settled period in the land of promise, there are effectively two major views in tension with each other (paralleling Brueggemann's ideas).

These are, on the one hand, a ‘royal’ ideology of power and exploitation and, on the other, a Yahwistic relational ideology wherein Israel’s relationship with its God and its land are inextricably intertwined. Thus, Habel’s ‘theocratic’, ‘ancestral household’, ‘prophetic’ and ‘agrarian’ ideologies are all facets of an overarching meta-ideology of land as Yahweh’s possession, conditionally entrusted to generations of Israelites and preserved through careful nurture in obedience to Torah and the rhythms of festivals, sabbath and jubilee. This fits well with Brueggemann’s “covenantal precarious land” [2002, 94]: covenantal because Israel’s relationship with the land arises from the Abrahamic and Mosaic covenants, and precarious because occupation of the land is conditional upon Israel’s continued observance of its covenantal obligations.

Anthropocentric and Theocentric Understandings of Land

This discussion of land within Hebraic covenants assists in discerning the relative place and value of wild nature. It highlights differences between the two root land ideologies, namely theo-anthropo-centric interpretations which marginalise nonhuman creation as resource or property, and contrasting theo-eco-centric approaches which relativise humanity’s self-importance and include all creation within God’s purposes.

The ‘Royal ideology’ justified centralised control and exploitation of people, wildlife and land alike, and was focussed on short-term satiation of human desires. It was thus not only anthropocentric but egocentric. When Israel first demanded their own King “as all the other nations have” (1 Kings 8:5), they were warned by the prophet Samuel of the likely consequences, including enforced military conscription (8:11-12), forced labour (8:12-13), nepotistic seizure of assets (8:14), exorbitant taxation (8:15-17) and enslavement (8:17). The reality of monarchy confirmed Samuel’s misgivings, with excesses of conspicuous consumption and disregard for Torah’s careful protection for people, animals and land.

The height of this Royal ideology was Solomon’s reign, successful in terms of territorial expansion and prosperity, but sowing the seeds of future failure. Solomon’s extravagant imperial household put enormous pressure on land and animal-life in Israel. According to 1 Kings 4:22-23, Solomon’s daily provisions encompassed 6,900 litres of flour, 13,800 litres of meal, ten stall-fed cattle, twenty pasture-fed cattle and a hundred sheep and goats, as well as deer, gazelles, roebucks and choice fowl. Such a menu, not for an occasional feast but daily

provision, would have led to rapid depletion of domestic and wild animal stocks. There are echoes of Solomon's excess in the royal hunting expeditions of Moghul and Victorian eras, with their celebration of destructive excess at the expense of nature's integrity.

The problem was not monarchy *per se*, but the nature of kingship, and specifically the relative importance of human and divine power. This is seen in the conflicted presentation of King Solomon in biblical texts. According to the Book of Kings, a source generally positive towards monarchy, Solomon begins well, acknowledging his personal inadequacy and reliance on Yahweh (1 Kings 3:7). When in a dream he is offered, "whatever you want me to give you" by Yahweh (3:5), he chooses discernment and wisdom (3:5-13). As noted previously, this wisdom specifically includes insight into botany and wildlife (4:33). Approving of Solomon's preference for wisdom over wealth and honour, Yahweh promises him these as well. The account acclaims Solomon's Royal greatness in his wisdom (3:16-28; 4:29-34), the contentment of his subjects (4:20), his military and diplomatic success (4:21), the construction of the Temple (5:1-8:66), and his fame and wealth (10:1-29).

Yet this is no royalist whitewash. Yahweh's blessing remains conditional upon the King's continued obedience to divine commands (3:14, 6:12-13). After the completion of the Temple, with its opulence and grandeur, and Solomon's eloquent prayer of dedication (8:23-53), Yahweh warns explicitly about the consequences of failing to worship God alone and of not keeping the commandments (9:4-9). Yet, despite these warnings, Solomon marries multiple foreign wives, begins to worship other gods, does "evil in the eyes of the Lord" (11:6) and consequently sets in train the events leading to Israel's partition (11:11-13).

Thus, within biblical texts themselves there is no simplistic approval of a 'Royal ideology', but a consistent placing of the monarchy within a theocentric submission to Yahweh's service and obedience. Kings may, like Solomon, be blessed with wisdom, wealth and prestige, but they are never removed from a place of humble obedience to God. Samuel's stark warnings of the likely results of monarchy (1 Samuel 8:10-22) are illustrated in Solomon's rise and fall.

Similarly, in Deuteronomy 17:14-20, a Hebraic understanding of kingship is described which challenges ancient, and current, imperial ideologies. The writer emphasises that an Israelite king must be chosen by Yahweh (17:15), from among rather than 'over' the people (as in surrounding nations) (17:14-15), and resistant to acquiring multiple wives and large royal treasuries (14:17), a direct critique of 1 Kings 4's evaluation of Solomon. Moreover, the king

is to base his personal life and royal demeanour upon a daily submission to Yahweh's demands in the Torah. Only then will he avoid the temptations of office, "and not consider himself better than his fellow Israelites" (17:20).

Solomon's reign concluded with syncretism, idolatry, rebellion, external attack, and the final dissolution of Israel into two Kingdoms. The prophet Ahijah proclaimed Yahweh's judgment (1 Kings 11:29-39), and the experiment of Israelite kingship in the imperial style of Egypt and Assyria proceeded towards inevitable demise, with reduced borders, infighting, and eventual exile. Brueggemann's summary of Solomon's legacy is apt: "It is Israel's primary attempt to have life on her own terms. Nothing here of Torah, but only horses, wives, silver and gold [2002, 83]. This is Babel (Genesis 11) and the Golden Calf (Exodus 32) all over again: anthropocentric self-glorification in rejection of God's claims. In the case of Solomon and the imperial model of monarchy, it also involved the exploitation of the land and its resources (human, animal, agricultural and mineral) for selfish and ultimately idolatrous ends.

Nothing could be more different than the covenantal ideal of God's relationship with people and land. The narrative of Naboth's vineyard in 1 Kings 21 epitomises these contrasting understandings. Queen Jezebel desires Naboth's land and asks King Ahab to seize it for her. She represents a pagan attitude to land, devoid of covenant, Torah, and trust in Yahweh as owner of all land. In contrast, Naboth sees land as an inalienable inheritance, a gift in trust from Yahweh to his ancestors and to be kept for his descendants. Whatever other factors were involved¹⁵ it is clear that, for Naboth, land is integral to his relationship with Yahweh rather than a commodity to be bought or sold. As Brueggemann memorably states, "It is the case not that the land belongs to him but that he belongs to the land" [2002, 88]. Wright completes the triangle of people-land-Yahweh in commenting, "An Israelite's responsibility to his family and its land ... can be seen as a reflex of his primary responsibility to God himself. To fulfil the first was to go a long way towards fulfilling the second" [1990, 158].

Competing land ideologies in Israel are, thus, significant in terms of revealing the relative priority given to theo-anthropo-centric and theo-eco-centric understandings. Whilst both affirm all creation as God's, the theo-anthropo-centric 'royal land ideology' effectively replaces God's authority with the King's. Centred on human self-aggrandisement, it sees 'natural resources'

¹⁵ There is debate regarding whether Naboth represents ancestor worship / veneration linked to the 5th commandment: H C Brichito et al., summarised in Wright 1990, 152-159.

(including animal life) as existing in a moral vacuum and freely available for human use or abuse. It is a teleologically anthropocentric view which marginalises God in favour of the ‘right’ of political and economic powers to exploit the earth to their own ends. Yet it is also a view that the biblical accounts consistently portray as contingent and open to challenge. No King, not even David the Lord’s beloved, or Solomon the wise, is infallible, but rather characterised by a repeated tendency to exploit people and land and to attempt to live independently of Yahweh’s priorities.

In contrast, the covenantal view of land binds humanity together with the earth and its creatures in a bond of mutual interdependence and responsibility, central to the worship of Yahweh and in obedience to Torah. It is a deeply theo-eco-centric ideology in that (unlike other cultures and religions of the period) it does not deify land, creatures, or the forces of nature but rather sees them as valuable simply because they are Yahweh’s possession.

The Ecological Content of the Mosaic Covenant

Having seen that the Abrahamic and Mosaic covenants are to be seen in continuity with the Noachic covenant in the inclusion of land and creatures and also that a theological understanding of land incorporates the notion of personified land as a responsive entity (a creational community), it is important to examine the specific content of the Mosaic covenant and the Torah which flowed from it with regard to the place of land and nonhuman animals.

The essential elements that accompanied the Sinai covenant and the occupation of the land of promise will be examined in turn. The aim is not to establish a parity of treatment in terms of humans and other creatures. The covenant was clearly anthropocentric in largely addressing the social, ethical, religious and dietary aspects of human life in community. It is a nation-building process within a particular eco-geographic context. As will be seen, however, the covenantal practices expected of Israel demonstrate Yahweh’s concerns for the whole created order, including nonhuman as well as human life.

The Decalogue, the most fundamental summary of covenantal Torah, is the obvious place to start. In both accounts (Exodus 20:1-17 and Deuteronomy 5:4-21), seven commandments are listed in summary form whilst three are expanded upon. Each of these three includes direct or indirect reference to animals. Thus, the second commandment forbids making images “in the form of anything in heaven above or on the earth beneath or in the waters below” (Deuteronomy

5:8). Animal images are implied here, and the previous chapter specifically forbids making idols “like any animal on earth or any bird that flies in the air, or like any creature that moves along the ground or any fish in the waters below” (4:17-18). The fourth commandment requires Sabbath obedience not only from Israelites and their families and servants, but also oxen, donkeys and other animals (5:14). Similarly, the tenth commandment forbids coveting of people, property, land and animals (5:21). What is noteworthy is both the inclusion of proper duties towards animals at the heart of the Torah, and the failure of most exegetes to note this. Whilst animals are never to be deified or idolised (distinguishing Israel from its neighbours), they clearly fall within the scope of Yahweh’s moral universe, and the fourth commandment in particular implies that their welfare is of concern to Yahweh.

In the Torah as a whole nonhuman creation is an important ancillary theme. Thus, whilst the vast majority of the legal and cultic code outlined in Deuteronomy concerns divine-human and inter-human relationships, the few mentions of duties to nonhuman creation are significant. These include material concerning Sabbath, Jubilee, festivals, and animal sacrifice (each of which will be considered in turn) and a small number of instructions which stand on their own.

The particular texts in Deuteronomy are as follows:

“Do not cook a young goat in its mother’s milk.” (14:21)

“When you lay siege to a city for a long time, fighting against it to capture it, do not destroy its trees by putting an axe to them, because you can eat their fruit. Do not cut them down. Are the trees people, that you should besiege them?” (20:19)

“If you come across a bird’s nest beside the road, either in a tree or on the ground, and the mother is sitting on the young or on the eggs, do not take the mother with the young. You may take the young, but be sure to let the mother go, so that it may go well with you and you may have a long life.” (22:6-7)

“Do not plant two kinds of seed in your vineyard; if you do, not only the crops you plant but also the fruit of the vineyard will be defiled. Do not plough with an ox and a donkey yoked together.” (22:9-10)

“Do not muzzle an ox while it is treading out the grain.” (25:4)

Common to all these texts is the belief that nonhuman creation, including plants as well as animals, has an integrity and moral worth beyond its immediate usefulness to humanity. Taken individually, specific texts may be interpreted in other ways. For example, the proscription on cooking a goat in its mother's milk (14:21) and on mixing together seeds or ploughing animals (22:9-10) undoubtedly link to wider themes of ritual purity, and the importance of keeping separate and holy, which pervaded all of Torah's consciousness [Douglas 1999]. Similarly, there could be a purely socio-economic argument for not destroying fruit trees (20:19) or nesting birds (22:6-7). However, taken together, and seen in the context of Yahweh's inclusion of all living creatures within the Noachic covenant, they assume a greater significance.

Perhaps the best way of identifying the thread linking these brief commands is to see them in the context of Psalm 145:9: "The Lord is good to all; he has compassion on all he has made." In this Psalm, the significance of which in Jewish worship was explored in the previous chapter, God is glorified and worshipped by all his works, human and nonhuman, and in turn is seen as compassionate and caring towards every part of the created order. In the light of God's protective concern towards all of creation, boiling a goat in its mother's milk, ploughing with two unequally yoked species, or forcing cattle to tread grain without letting them feed whilst they work, are not only unnecessary cruelty but actions that thereby dishonour God.

Yahweh's moral concern is particularly evident in the injunction against chopping down fruit trees (20:19), and the prohibition on killing the mother bird (22:6-7). In the former case, the rhetorical question, "Are the trees people, that you should besiege them?" draws attention to the absurdity of waging war against the natural world, which sustains and nurtures all living creatures. In the latter case, permission is granted to harvest the eggs or young of ground-nesting birds but never the mother bird, "so that it may go well with you and you may have a long life." The principle of sustainable consumption of creation's goodness (fruit from trees, eggs from nests) is accompanied by a prohibition of the destruction of the source of that goodness. A mother bird will attempt to nest again if it loses a nest, but human wellbeing and longevity are put at threat if nature is exploited in an unsustainable way. When seen in the light of the Noachic covenant and God's compassion towards all his works, these injunctions become more than common-sense rules about good husbandry but rather reflect the Creator's appreciation of the integrity of the whole creation.

Sabbath and Jubilee

Yahweh's concern for the whole creation is further reflected in the Sabbath and Jubilee laws. These rightly belong together, Jubilee being an outworking of Sabbatarian principles on a longer-term basis. Sabbath had its roots within the creation narrative of Genesis 1-2:3, where the primary emphasis is on God's rest and appreciation of the whole created order. The extent to which the creation passages were actually written or redacted in exilic times is less important than the theological significance of their placement at the start of the Pentateuch. Sabbath was a foundational theocentric creational ordinance, a celebration in restful worship of all that is 'very good' about God's world. Sabbath had further origins in Israel's post-exodus wanderings in the wilderness, where God provided daily Manna and Quail, but gave double on the sixth day before people rested on the seventh, as "a holy Sabbath to the Lord" (Exodus 16:23). Sabbath in the wilderness, as corporate preparation for occupying the land of promise, was focussed on worshipping Yahweh in the context of recognising humanity's utter dependence upon God's provision through the fragile gifts of creation.

Lowery makes it clear that, whilst cancelling land-debts and the manumission of slaves were widespread in the Ancient Near East, there are elements about Israel's Sabbath-Jubilee that, "have no clear parallel in known ancient literature outside of Israel" [2000, 24]. Moreover, the injunctions for the Sabbath day and Sabbath year (Exodus 23:10-12) specifically include provision for both domesticated and wild animals. According to 23:12, a key purpose of Israelites resting on the Sabbath day was that, "your ox and your donkey may rest," as well as slaves and resident foreigners. As Ross and Gloria Kinsler state, "This commandment is really concerned primarily about rest and the de-absolutizing of work ... so that all, people and animals, including slaves and aliens, might rest" [1999, 10].

Similarly, during the Sabbath year, fields, vineyards and olive groves were to be left untended so that not only the poor but also "the wild animals" might feed in peace (23:11). Exodus 23 deliberately places nonhuman alongside human creatures as objects of moral concern, and importantly includes wild animals which lay outside the boundaries of human society, had no economic benefit, and could be of importance only if they mattered to God. The conclusion must be that, in a theo-eco-centric Sabbath-observing worldview, God's concern and compassion for all creatures places a moral obligation of care upon God's people. As Lowery states, "Sabbath year, like the creation-sabbath narrative in Genesis 1, rejects an overly anthropocentric view of the world" [2000, 61]. Sabbath, in its reorientation away from anthropocentrism towards theo-eco-centrism, places human moral obligations into a

heterocentric orbit, wherein the needs of the other – the poor, the foreigner, domestic and wild animals – have moral importance.

Regarding the Jubilee year, the Sabbath of sabbatical years ($7 \times 7 + 1 = 50$) described in Leviticus 25-26, there has been much debate as to whether this was ever observed or could practically have been kept. Fager follows Alt in arguing it probably arose as land-use shifted from pastoralism to agriculture, and that there is no evidence of Jubilee in the intertestamental period [Fager 1993]. However, Ched Myers attacks mainstream commentators, suggesting that, “skeptical of the Jubilee tradition as either irrelevant, utopian, dreaming, or threatening, radical propaganda, these interpreters have not found evidence for its practice in either Testament because they have not been looking for it” [in Kinsler and Kinsler 1999, x].

Using careful exegesis, the Kinslers see Sabbath and Jubilee as encapsulating a thorough rejection of the hierarchical imperialism of surrounding nations in favour of “a tribal paradigm” based around Covenant, Sabbath and Jubilee, and providing a basis for the two primary concerns of God and God’s people: social justice and ecological integrity” [ibid, 34-36]. McKibben, referencing Isaiah 5:8’s condemnation of those who “add house to house and join field to field”, also sees Sabbath and Jubilee as antidotes to the kind of agribusiness that has no respect for people or wildlife [1994, 38-39]. Lowery similarly recognises Jubilee’s radical significance: “However impractical, jubilee land redistribution is a systemic solution to a systemic problem of royal political economy: the persistent inability of subsistence farmers to meet royal obligations” [2000, 68]. By displacing despotic royal authority and relativising land-ownership, Sabbath and Jubilee created a relational vision of society and ecology that was deeply theo-eco-centric and morally heterocentric, recognising human reliance on the fragile goodness of nature and human responsibility to protect its integrity.

Festivals

Three primary passages in the Mosaic law describe the religious festivals prescribed for the people of Israel: Leviticus 23, Numbers 28-29, and Deuteronomy 16. Each list is different, but whether one takes a documentary or fragmentary approach to the sources behind these texts, what is clear from these passages is the agrarian nature of Israel’s religious festivals, and their role in intertwining relationships between God, people, land and creatures. Hiebert, writing about the Yahwistic narrative as a whole, states, “The agricultural setting of this drama is not a mere stage upon which the evens of the divine-human relationship unfold. It is rather the theme

of the drama itself” [1996, 72]. Israel’s religion was deeply interwoven with the rhythms and seasons of the agricultural year, from the weekly Sabbath rest, through monthly lunar cycles (Numbers 28:11-15), planting, harvests and in all the major festivals.

The major Hebrew festivals illustrate the unique genius of Israelite religion, in that, “the concept of Yahweh as the Lord of nature was connected with the concept of Yahweh as the Lord of history” [von Waldow 1974, 497]. Each of the three major festivals, Unleavened Bread, Weeks, and Tabernacles (Deuteronomy 16:16-17; 2 Chronicles 8:13), included both an historic and agrarian significance. The Feast of Passover (*Pesach*) (Leviticus 23:4-8, Numbers 28:16-25, Deuteronomy 16:1-7) re-enacted Yahweh’s historic redemption of the Hebrew slaves from Egypt (Exodus 12), yet was also tied to the Festival of Unleavened Bread marking the beginning of the harvest season. The Feast of Weeks (*Shavu’ot*), fifty days later, traditionally marked the giving of Torah to Israel, and also the offering of the first fruits of agricultural produce. It was accompanied by an injunction to leave field margins and gleanings unharvested for the sake of the poor and resident foreigners. Finally, the Festival of Tabernacles (*Sukkot*) included both a reminder of God’s provision for Israel during her wilderness wanderings, and also marked the final ingathering of crops.

The fact that Hebrew festivals were rooted both in human history and in natural rhythms is another illustration of the way in which neither an exclusively anthropocentric historical approach nor a narrowly ecocentric agrarian approach provides an adequately biblical overview. Religious festivals were most centrally theocentric, emphasising dependence upon and thankfulness to God for provision and sustenance in both historical and ecological terms.

Animal Sacrifices

The issues around the covenantal sacrificial system in relation to the value of animal life have already been raised in relation to the Noachic covenant. Andrew Linzey’s question summarises the issues: “How could it be that a God who out of love creates animals would delight in their gratuitous destruction?” [1994, 104]. At face value, the lists of appropriate ritual sacrifices to be offered daily, monthly and at festivals at the Tabernacle, in addition to personal sacrifices, encompass vast waste, and a profound lack of appreciation of animal life. As Cyril Rodd states, “To take animals and compel them to die as part of the worship of God and to expiate human sin seems to imply a low view of their intrinsic worth – they are little more than disposable – though valuable – property” [2001, 210].

Understanding animal sacrifice in the context of Old Testament religion means entering a culture and worldview that is alien to contemporary readers. Seeking modern environmental sensibilities is problematic and tends towards two pitfalls. Either, apparently eco-friendly texts are taken out of context and other passages ignored, or the Bible is critiqued for not living up to an anachronistic ecocentric ideal. Rodd accuses Linzey of the former in seeking a biblical ethic for animal rights, stating: “Finding support in the Bible for a more enlightened ethics of animal welfare has demanded a highly selective approach” [ibid, 207]. In contrast, Habel tends towards the latter trap, with an acknowledged aim, “to challenge our use of the Bible as a vehicle to support the status quo, and to consider a radical re-reading of the text” [2009, viii]. Such approaches fall down on several grounds. Firstly, their appeal to external human authority is inevitably unsuccessful in persuading the majority of the Christian faithful. As Horrell has written of Habel’s *Earth Bible* project as a whole, “authority effectively lies not with the Bible or the Christian tradition, but with the ecojustice principles.” [2010, 7-8]. Secondly, the imposition of an alien hermeneutic makes biblical ecological attitudes appear incoherent. The Bible does not answer the questions of contemporary environmentalists or animal rights activists. However, by attempting genuinely to understand the varied attitudes to animals within the Bible in their historical, cultural, cultic and ecological contexts, we may gain insights which speak through the centuries and challenge our own attitudes and received understandings of the biblical messages.

Applying this to the sacrificial system is complex. Mary Douglas brings important insights in distinguishing the differences between Deuteronomy and Leviticus. Whilst both are theocentric, the Deuteronomist source has a governmental, hierarchical, rational worldview, whilst the Levitical Priestly source is rooted in a theocratic, analogical way of thinking. It is not surprising, therefore, that post-Enlightenment scholarship struggles to comprehend Leviticus. Writing as an anthropologist Douglas states, “Leviticus is unequivocally in an archaic literary form corresponding to the thought style described as magico-religious or mytho-poetic. No wonder we find it obscure” [1999, 40]. She argues that reading Leviticus according to its own literary conventions consistently conveys morality in terms of the ritualistic ordering of every part of life, from clothing or sex, to eating and agriculture. It uses ‘ring compositions’ comprised of parallelism and chiasmus, where seemingly unrelated things or areas of life, such as clothing, animal skins and the tabernacle, may be thematically linked through symbolic notions such as ‘covering’. Seen in this light, animal sacrifice, “is one of the main figural motifs with which it

[Leviticus] presents the principles of God's creation, and the divine order of existence" [ibid, 66].

In a culture where the minutiae of everyday life were understood religiously, the taking of life both in sacrifice and in meat-eating were profound acts. Understanding Yahweh as giver of all life and breath meant that the shedding of life-blood was surrounded by ritual and proscription. Whilst modern sensibilities may be shocked by the scale of sacrificial death (Numbers 28-29), both Douglas and Milgrom [2004] stress that this should be seen in the context of meat for human consumption, not simply 'wasted' in religious ritual. Milgrom argues that in Leviticus, "Animal life is inviolable except for a few edible animals, provided they are slaughtered properly (i.e. painlessly, chap. 11) and their blood (i.e. their life) is drained and thereby returned to God" [2004, 12]. Douglas similarly proposes that, "Leviticus has to be read in line with Psalm 145:8-9: the God of Israel has compassion for all that he made. His love for animal creation lies behind his laws against eating and touching their corpses" [1999, 1]. She makes a strong case that the ritual killing of animals (as still practised under Jewish kosher and Islamic halal regulations) is less barbarous than the anonymised mechanical slaughterhouses of industrial society, because it acknowledges the sacred gift of life and tightly defines the parameters in which life can be taken.

At the heart of these readings of Leviticus lies a conviction that the use of animals, both in sacrifice and for human consumption, demonstrates a profound respect for life emanating from an understanding of God as creator and sustainer of all living creatures, and codified in the Noachic and Mosaic covenants. Robb rightly critiques Douglas' claim that Leviticus' respect for animals reveals a "modern religion" [ibid, 2], accusing her of reading "biblical texts with the ethical sensitivities of the modern environmentalist," [2009, 216]. However, consequently, Robb and others disregard the importance of what Douglas and Milgrom have uncovered. Levitical understandings of respect for life are anything but modern. They are self-consciously ancient in seeking to recover, probably from an exilic perspective, the ordering of creation and Israel's foundational covenants. Animals are valuable, not because of contemporary environmental sensibilities, but because of who God is and because God's moral universe includes all life.

This deeply theo-eco-centric understanding that all life is God's and that people are accountable to God for their use of animals creates the complex purity legislation around clean and unclean animals. It is why purity laws apply equally to impure or dead animal and human flesh, and the

sacrificial system puts a firm boundary around the killing of animals for food, clothing or pleasure, all of which are taboo outside the cultic context (Leviticus 17:3-4). In this way of thinking, describing certain animals as ‘abominable’ or ‘detestable’ is not an ontological dismissal of their value. Rather, they are unclean only in relation to contact with the people of Israel. These are laws of ritual separation, not universal moral generalisations. Thus, in terms of Deuteronomy 14:3-9 and Leviticus 11:2-8: “the two texts say that the unclean animals are only ‘unclean for you’. Because the dietary rules about land animals derive from the covenant, they only apply to the people of Israel” [Douglas 1999, 137]. Moreover, animals only became unclean at the point of death (thus camels and donkeys were used as pack animals and therefore touched whilst alive), which in turn gave them protection from hunting.

Douglas claims that, “to be classified unclean ought to be an advantage for the survival of the species” [ibid, 142]. Milgrom makes a similar point in stating, “By now it should be evident that the Bible’s method of taming the killer instinct in humans is none other than its system of dietary laws” [2004, 103]. Whilst species survival may not be a primary concern within the Mosaic covenant, these comments accurately reflect Yahweh’s earlier paradigmatic covenant with all living creatures (Genesis 9) and the Noachic accounts’ concern that representatives of every kind of living creature be rescued from the floodwaters.

In relation to the accusation that animal sacrifice reveals a bloodthirsty notion of God, it is vital to understand ancient Hebrew thought. All life proceeded from and returned to God, so the death of either animal or human was not the tragedy that modern sensibilities imagine. Rather, “the act of sacrifice is less a killing than a transformation from one kind of existence into another” [Douglas 1999, 69]. Importantly, the aroma that pleases God is not that of burnt flesh but that of obedient worship. In Leviticus 1, where the Mosaic laws for burnt offerings are detailed, the phrase “an aroma pleasing to the Lord” is used three times (1:9, 13, 17). The passage makes it clear that sacrificial offerings are in symbolic atonement for the sins of the person presenting the sacrifice. Thus, although the sacrificial system entails the death of animals, it neither implies that their value is merely instrumental nor that their ultimate importance is measurable in relation to human beings. Rather, it is the gift of a valuable creature back to the God who created and owns it that is at the heart of the sacrificial system.

This is made explicit in Isaiah 1:11-20, written in protest at a time when the sacrificial system had become an ossified perfunctory ritual disconnected from personal righteousness. Isaiah portrays God condemning multitudes of meaningless sacrifices: “I have more than enough of

burnt offerings, of rams and the fat of fattened animals; I have no pleasure in the blood of bulls and lambs and goats” (Isaiah 1:11). From God’s perspective, the freely offered sacrifice of a valuable animal or bird, symbolically pure and without blemish, indicated a desire to recognise God’s rule over all of life and recognition of human inadequacy and sinfulness in God’s presence. Hard as it is for contemporary minds to grasp, the sacrifice of animals and birds is an indicator not of their disposability, but of their value and preciousness before God.

Conclusion

Concluding this reflection on the place of wild nature within Hebrew covenantal theology, it is important to summarise the implications of our findings for the four key questions this thesis seeks to address:

1. Why do we value wild nature?

James Nash argues that the Old Testament affirms creation only in terms of the human use of land and animals in agriculture, and is overwhelmingly disinterested in the importance of wild nature [Nash 2009]. Speaking of Genesis 2:15, he writes: “the biblical author’s application seems to be to agricultural sustainability, not biological diversity” [ibid, 217]. Elsewhere he states, “The bulk of the Bible is indifferent, insensitive or even antagonistic to untamed nature (as opposed to domesticated nature). The Bible is in the main ecologically unconscious” [ibid, 214]. Nash’s allegation is that the biblical view of nature is anthropocentric, and “the Promised Land is prized not as a vibrant ecosystem, but rather as an agricultural paradise” [ibid, 219].

Nash’s critique is important and challenges the argument of this thesis. Of course, he is correct that most references to land and nature concern human usage. The Bible is inevitably perspectively anthropocentric, and its human subjects and authors frequently descend into self-interest. Yet, this is very different from the divinely sanctioned teleological anthropocentrism Nash implies, wherein nature only exists for human benefit. Ellen Davis agrees with Nash that biblical authors “are more interested in agricultural sustainability than biological diversity”, but argues that this never “stands in opposition to ‘a comprehensive commitment to ecological integrity’” [2009b, 260-261]. Moreover, whereas anthropocentric worldviews characteristically conceptualise wild nature as a threat to human security and agricultural profitability, such attitudes are rare in the Hebrew scriptures. Rather, all creatures both domesticated and wild

clearly belong to God (Psalm 50:10-12), and dangerous wild animals are most often portrayed as divine agents of judgment on human sin (Deuteronomy 28:26; Jeremiah 15:3, 16:4).

Nash's analysis is conceptionally flawed because he adopts a modern, western false dichotomy between nature and culture as fundamentally in opposition. He views wild nature as wilderness to be protected from human intrusion, rather than recognising creation as fruitful and generative with space for both domestic and wild creatures alongside humanity. Nash's concept is taken from the ethos of American National Parks rather than the inhabited wildernesses of the Middle East. As Michael Northcott has written, "Nash here reveals his own formation in the American wilderness tradition which invests value in nature apart from humans but does not, as the Bible does, see humans and other animals in an inextricable relationship of co-creatureliness" [2009, 252].

Nash ignores both God's creational concern for wild nature as expressed in Job and Psalm 104, and also the inclusion of biodiversity within biblical covenant theology. The covenantal understanding of creation explored in this chapter does not permit humanity to use wild nature exploitatively, but recognises a deep interdependence within which wild creatures are intrinsically included. Sustainable agriculture and biodiversity protection are, therefore, not separate but conjoined issues. Wilderness cannot be protected unless people learn to live well and look after the more familiar wildlife and domestic animals that live around their homes and farms. Davis asks rhetorically: "How can we love the biodiversity we have not seen, if we fail to love the biodiversity we have seen?" [2009b, 263].

The covenants of the Hebrew bible embed a relational understanding of interdependence between humanity, wild and domestic creatures, and the land itself, at the heart of both religious practice and practical ethics. It is core to God's covenant purpose that human and nonhuman creatures are bound together in creation, judgment and redemptive promise. This means that to value wild nature and fertile land is concomitant with valuing relationship with God, neighbour and self. This is a truly theocentric understanding, in that all value is ultimately derived from God as creator, and as initiator and guarantor of covenant. It is also deeply ecocentric, not as privileging the nonhuman over the human, but in the sense of ecology as the science of interdependence within the 'household of nature' [Friedrichs 1958, 154]. Biblical covenants are a deeply ecological concept in that they embed relationality and community as core to right living. Although human beings are inevitably at the heart of biblical covenants, the concept is antithetical to any teleological anthropocentrism.

In the Noachic covenant, which is foundational to later Israelite covenants, it is explicit that the preservation of representatives of ‘all living kinds’ of creatures is a divine priority. Their value is not linked to their utility or appreciation by humanity but is intrinsic to God valuing them. They, and the earth itself, are equal partners in the eternal covenant established with the rainbow. Later, after the Mosaic covenant stipulates how to live well in the land of promise, competing land ideologies arise: a theo-anthropo-centric ‘Royal’ understanding which objectifies land and allows monarch and people to exploit wild creatures, and a theo-eco-centric covenantal agrarian understanding wherein land is a responsive partner, and creatures are respected as of value to God, participate in sabbath rest, and are protected from exploitation by proscriptive taboos regarding animal sacrifice.

The agrarian writer Wendell Berry has written, “The Bible is not a book only about ‘spirituality’ or getting to Heaven, but is also a practical book about the good use of land and creatures as a religious practice, and about the abuse of land and creatures as a kind of blasphemy” [in introduction to Davis 2009a, x]. As this chapter has demonstrated, the covenants which stand at the heart of the Hebrew Scriptures include land and creatures within the sphere of God’s, and thereby of humanity’s, concerns. Whilst animals may be used for food, clothing and work, their life is sacred, and they are of value to God irrespective of their usefulness to humanity. Within biblical covenants the wellbeing of all creation is interconnected and there can be no good life for people without good treatment of animal kind.

Moreover, as biblical prophets reflected on Israel’s failure to keep the covenant and looked towards a ‘new covenant’, they foresaw that this too would include animals as well as people in a new relationship with God. Jeremiah 31:27-28 states: “‘The days are coming,’ declares the Lord, ‘when I will plant the kingdoms of Israel and Judah with the offspring of people and of animals. Just as I watched over them to uproot and tear down, and to overthrow, destroy and bring disaster, so I will watch over them to build and to plant.’” Jeremiah clearly recognises God’s everlasting covenant with nonhuman creation as a guarantee that apparently fallible human covenants are underwritten by God’s faithfulness to nature. Similarly, Hosea 2:18 writes of a new covenant incorporating wild nature in language echoing Genesis 1: “In that day I will make a covenant for them with the beasts of the field, the birds in the sky and the creatures that move along the ground. Bow and sword and battle I will abolish from the land, so that all may lie down in safety.”

Thus, the value of wild nature is embedded theologically in God's independent valuation of wild creatures and land, codified in their being covenant partners along with God's people. Derivatively, as shown in Noah's ark and in the Noachic and later covenants, we may speak of nature's value as inherent or intrinsic, in that it matters independently of humanity. At the same time, the relational nature of covenant theology binds humans in relationship with the well-being of the land and its creatures. We are to value wild nature first because God does, and secondly because we are part of nature, and its welfare and our own are inseparable.

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?

The Noachic account is particularly helpful in examining the polarising contemporary issue of whether value resides primarily in 'kinds' of creature, or in individuals. God's judgment on human sin leads to the death of most individual animals (and humans), and yet the emphasis is on God's desire to rescue representative breeding pairs of each kind on the ark. Whilst the text does not elaborate, there is an implication that God invests particular value in the survival of distinct types of creature. Just as in Genesis 1, it is the completion of "*all* that God has made" that is *very* good, so it appears that the totality of biodiversity matters to God, and each kind, or species, possesses some unique aspect of God's self-revelation. Similarly, in one of the few passages in Deuteronomy explicitly relating to wild nature, farmers are permitted to take young birds from a nest, presumably for their own consumption, but must not kill the mother bird (22:6-7). Again, the implication is that the life of individuals matters less than the continuance of the species, since the mother bird will attempt to nest again.

This is not to say that God has no interest in the suffering of individual creatures. The Noachic covenant in Genesis 9 is with all living creatures, not simply symbolic representatives, and the Deuteronomic legislation protects working animals from abuse by giving them Sabbath rest (5:14), forbidding the unequal yoking of oxen and donkey (22:10), and allowing cattle to feed whilst treading grain (25:4). In a fallen world, humans may now eat animals (Genesis 9:3-6) and use them in sacrifice (8:20-22), although in both cases ritually circumscribed to acknowledge their value before God.

Overall within Old Testament covenants, it is clear that, whilst individual creatures have value and God's compassion extends to all (Psalm 145:9), yet suffering and death are to be expected, and there is greater value invested in the continuance of 'kinds' of wild creatures. Today,

therefore, we may speak of the importance of animal welfare, but simultaneously prioritise tackling the threat of anthropogenic extinctions as a fundamentally serious theological and ethical concern. If God included representatives of every kind upon the ark, who are we to drive species to extinction by greed or carelessness?

3. Can and should we put an economic price on nature?

It is the relational ethos of biblical covenant theology which speaks so powerfully into current debates on the suitability of economic valuations of nature. The land and the creatures which inhabit it, domestic and wild, are never objectified as commodities to be exploited. Rather, they are personified as subjects within an interdependent relational web. The kind of language that reduces fellow creatures, or even living soil, to ‘natural capital’, ‘resource’, or ‘ecosystem service’ is alien to Old Testament thinking, not because it is modern but because it encapsulates an ‘I-it’ rather than an ‘I-Thou’ relationship between humans and the rest of nature.

The internal debate within the Hebrew scriptures between ‘Royal’ and ‘covenantal’ understandings of land parallels current discussions as to whether wild nature is to be valued instrumentally or possesses its own (divinely given) inherent worth. Kings tended to see both human citizens and wild nature as possessions for self-aggrandizement and resources for exploitation. In contrast, Deuteronomy 17:14-20 reveals a covenantal Hebraic model of monarchical responsibility before God in which the king must be “from among” the Israelites (15), is forbidden from accumulating wives, wealth and horses (16-17), and “must not consider himself better than his fellow Israelites” (20). Both monarchs and landholders are subject to God’s radical sabbath and jubilee principles which relativise all ownership of animals and land, and envisage an economic model that values good relationships and ecological harmony above profit. Lowery rightly observes, “Biblical sabbath and jubilee traditions provide a lens by which to focus theological reflection on the spiritual, ecological, and economic challenges that face us in this era of globalizing economy” [2000, 3].

Reading the Noachic and Mosaic covenantal and legislative texts in the light of contemporary ecological debates demonstrates that economic valuations of God’s creation stand in danger of breaking the ties that bind humanity to the rest of nature. Putting a price on nature inevitably reduces its valuation to narrowly anthropocentric parameters and, once God’s ultimate ownership of creation (Psalm 24:1-2; 50:10-12) is forgotten, to the idolatrous pursuit of wealth.

It is an urgent task to rediscover ways to value wild nature independently, irrespective of economic benefits, so that the thriving of people, wildlife and land together becomes a measure of success rather than the narrow metrics of Gross National Product. The metaphor of Noah's ark as symbolic of a liveable planet with space and provision for all creatures should inspire economists and political philosophers towards models that move beyond the false promises of aggressive competitive capitalism towards a cooperative vision of mutual flourishing, undergirded by a covenant that binds together all living beings and the earth itself.

4. What is an appropriate ecological anthropology?

In examining creation in Genesis and biblical Wisdom literature, we saw the tension between theo-anthropo-centric and theo-eco-centric readings, and argued for a 'servant steward' model which both recognises the centrality of human agency within God's purposes, yet relativises it in the light of God's independent delight in and care for creation. In the story of Noah as God's co-worker in redeeming wildlife of every kind, we can define this concept more sharply.

Noah is presented as God's chosen leader, given authority over wild nature and, in a post-diluvian context, permission to utilise animals for food and sacrifice. To this extent the story is functionally anthropocentric. Yet, it is clear throughout that the creatures belong to God, even those eaten or sacrificed, with taboos around the shedding of blood to demonstrate life's sacredness. Furthermore, Noah's leadership is within the context of God's wider purposes, which are teleologically ecocentric. The animals are not rescued for human benefit or enjoyment, but because they matter to God. The Noachic covenant is established not only with Noah but with every living creature upon the earth. Moreover, the overarching context of judgment upon human sin places Noah's leadership as both provisional and conditional on his alignment to God's will.

If we compare Noah with Israel's later contrasting ideologies of land, we find none of the 'royal' concept which sees nature as resource to be exploited and managed for personal gain. Instead we find a close alignment with the 'covenantal' model of contingent dependence upon God and upon a network of human and ecological relationships. Bringing the language of 'stewardship' to bear on the covenantal model, we see that humanity is to steward the land not for maximum yield or profit, but allowing it to rest, permitting wildlife to glean at field margins and raise their young and recognising, through religious practices of sacrifice and festival, that care for land and creatures is integral to worshipping Yahweh.

Thus, humanity's self-understanding in relation to nonhuman creatures and the land itself is fundamentally that of fellow-members within a covenant of interdependence. The language of stewardship can only be used if it is qualified to emphasise that we steward from within the community of creation, rather than above it. We are all passengers on the ark, even if our responsibilities are differentiated. Hebrew covenants lead to a deeply ecological anthropology because they emphasise, time and again, that to live well in God's land we need to live in good relationship with fellow creatures. Our well-being and that of wild nature are tied together indissolubly (Deuteronomy 22:7). The implications for us today are manifold, and perhaps begin by acknowledging that the alienation from nature, from which so many today suffer [Louv 2005] is catastrophic for the flourishing of both humans and other creatures, and requires urgent addressing educationally, socially and politically.

This chapter has argued that, whilst there are comparatively few direct references to wild animals in covenantal literature and although the culturally alien nature of archaic Israelite religion sometimes obscures the significance of certain passages, nevertheless, the biblical covenants provide a solid basis for the inclusion of all living creatures within the orbit of human moral concern. Fundamental to this understanding is the Noachic covenant, wherein Yahweh is revealed to have not just a creative but a redemptive covenantal relationship with every creature upon the earth. In the development of the Abrahamic and Mosaic covenants the integral inclusion of 'land' and the regulations for Sabbath, Jubilee and festivals serve as reminders that divine covenants are not bipartite contracts between God and humanity, but include the rest of the created order within Yahweh's covenantal promise.

CHAPTER 4

ECOLOGICAL CHRISTOLOGY

Having examined biblical creation accounts and covenantal texts in relation to the place of wild nature, it is necessary to turn to the New Testament, and specifically the person, work and significance of Jesus Christ. This provides an immediate challenge in that the majority of biblical texts explicitly referring to human responsibility towards nonhuman creation are found in the Hebrew Scriptures. Additionally, according to some theologians the New Testament focuses away from creation towards good news for humanity in Christ. Richard Bauckham speaks of, “the impression that the Gospels have not much to offer on this subject” [2009, 1], and James Jones in *Jesus and the Earth* writes: “Up until my study leave, if you had asked me what Jesus had to say about the earth and whether the Gospels had anything to say in formulating an environmental ethic, I would have thought ‘precious little’” [2003, 7].

This suggests a significant difficulty regarding the relevance of *Christian* theology to the place of wild nature in God’s purposes. In 1972, Joseph Sittler wrote that, in the light of the environmental crisis, “a Christology that does not suppose the power and presence and grace and judgment of God in Christ with an amplitude congruent with these power potentials as an operational mode of life deeply formative of technological man’s personhood will be an unintelligible Christology, even an uninteresting one” [1972, 337]. Behind Sittler’s quest for an authentic ecological Christology, lies one of the key questions identified for this thesis: “What is an appropriate ecological anthropology?” Understanding how Christ, the new Adam, spoke about and related to nonhuman creation is key to understanding how humanity as a whole is placed in relation to the rest of nature. Yet, as this chapter will argue, ecological Christology is important not only for ecological anthropology, but also with regards to the implications of the core Christian doctrines of incarnation and redemption to the value of wild nature.

Sittler’s warning about the dangers of an ‘unintelligible’ or ‘uninteresting’ Christology is reflected in a plethora of recent writing emerging from the conservation and environmental movements, appealing to faith communities to participate in finding a moral and spiritual basis for understanding humanity’s place in relation to the natural environment. The sustainability ‘guru’ Jonathon Porritt has issued a plea for “‘a new story’, enabling us ... to understand better our place in creation, and to experience that sense of interconnectedness and interdependence with the rest of life on Earth” [SDC/WWF 2005, 5]. Porritt’s successor as Director of Friends of the Earth UK, Tony Juniper, agrees that a “stronger spiritual connection with the Earth”

[Environment Agency 2007, 17] is required, and the Environment Agency's Chief Scientist, Mark Everard has called for, "a reverence for what is natural that is deep enough to provoke proportionate action to protect it" [ibid, 17]. Science, education, business and politics are vital but do not address the values and beliefs at the heart of today's multiple environmental crises. A seminal paper on *The Death of Environmentalism* puts it thus: "Environmentalists need to tap into the creative worlds of myth-making, even religion, not to better sell narrow and technical policy proposals but rather to figure out who we are and who we need to be" [Shellenberger and Nordhaus 2004].

The implication of Sittler's challenge, and the appeals from secular environmentalists, is that historic Christianity will be marginalised in the search for worldviews with a broad enough canvas to address today's environmental challenges, unless a suitably ecological Christology can be constructed upon New Testament foundations. For Christians, it is not enough to have an Old Testament creation theology alone, because the Hebrew Scriptures are interpreted through a Christocentric lens. This does not mean ignoring Christianity's Jewish foundations but rather discerning a complex intertextuality [Hays 2016], involving both continuity and radical reinterpretation in the way the Gospels and Epistles use their Hebraic antecedents.

The same hermeneutical challenges face the search for an ecological Christology as face any interrogation of the canonical Christian scriptures. A dialogical approach of suspicion and retrieval is needed, asking new questions of the text and of traditional interpretations yet also allowing both the text and the tradition of interpretation to question contemporary perspectives [Ricoeur 1970]. David Tracy astutely describes hermeneutical dialogue as the ability "to give the other (whether person, event or text) our attention as other, not as a projection of our present fears, hopes and desires" [1990, 3], and this is the approach that we will follow here.

It is acknowledged that certain New Testament passages are less given to an ecological reading than others. 'Difficult' passages, particularly those containing Christ's recorded words and actions, will be acknowledged. At the same time, it is proposed that a Christological centre of gravity can be found in Johannine and Pauline literature, providing an ecotheological framework, within which the implications of Christ's person and work for the place of all creation, and wild nature in particular, come into sharp focus.

Such an approach necessitates addressing distortions in the majority western tradition of biblical interpretation. Writing in relation to the Shoah or Holocaust, but equally applicable to

the radical re-examination of theological tradition required by our contemporary ecological context, Tracy writes of the need for suspicion of a largely anthropocentric, Eurocentric, white, male, interpretive elite, and the need to question this in the light of “the ‘dangerous’ prophetic memory of Jesus” [1982, 90]. Thus, as we examine the Gospels and Epistles there will be a conscious resistance to the gravitational pull of anthropocentric assumptions regarding Christ’s birth, life, death, resurrection and ascension. Rather, the synoptic Gospels will be examined in the light of the Hebrew Bible (particularly its theocentric wisdom literature and its Messianic prophecies), and Johannine and Pauline passages pointing to the cosmic relevance of Christ will be analysed. As we will see, the theocentrism of the Hebrew Scriptures is transformed into a Christocentrism which incorporates humanity within an orbit that is both deeper in its inclusion of the earth and its creatures, and wider in its cosmic vision of Christ’s importance.

Jesus and Wisdom

Richard Bauckham argues that the key to discerning the synoptic Gospels’ ecological significance, “lies in appreciating links between the Gospels and the Hebrew Bible, which the Gospels themselves of course everywhere presuppose” [2009, 1]. Thus, the synoptic Gospels show Jesus habitually gathering disciples and crowds to hear stories drawn from nature. In this, Jesus followed an intertestamental tradition of wandering Rabbinic teachers who used Hebrew wisdom as a commentary on Torah, and vice-versa [Bromiley 1995, 1080]. Jesus’ teaching continually used natural analogies and illustrations to explain Torah and sometimes to re-interpret it afresh. As Luiz Ruscillo states with reference to Zimmerli [1976], “The whole of Wisdom literature and theology can be described as ‘creation theology’. The wise person reflected on all aspects of creation, earth, plants, animals and humanity” [2007, 10].

In the synoptics, particularly Matthew, we see the culmination of this nature wisdom tradition in Christ’s teaching. Just as Proverbs, Song of Songs and Job contain frequent references to the close observation of animals, birds and natural phenomena as a way of discerning God’s character and how to live wisely, so Matthew alone contains 27 separate references to animals and birds [Jones 2003, 50]. The Sermon on the Mount (Matthew 5-7) in particular reveals how closely Jesus was indebted to, and built upon, the Old Testament wisdom tradition.

We noted earlier that Solomon’s wisdom included knowledge of plants, animals, birds, reptiles and fish (1 Kings 4:33-34). In a similar way, Jesus described foxes and doves, snakes and fig trees, ravens and lilies, and instructed his followers to study birds and flowers. In Matthew 6:26-

28 the Greek for ‘look at’, *emblepsate*, is in the imperative. Commenting on this, Martin Luther stated, “You see, he is making the birds our schoolmasters and teachers” [1956, 197-198]. This form of nature wisdom, commended and exemplified by Jesus, and gained through immersion in nature, is frequently spiritualised in contemporary commentaries on the Gospels. Yet, as Davis sagely comments, “It is regrettable that the church has in the last three centuries largely lost sight of the fact that “nature wisdom” is indispensable to an accurate estimation of the proper human role in God’s creation” [2000, 56].

The Beatitudes (Matthew 5:3-12) are also strongly redolent of wisdom influence in their pithy style, their overturning of conventional values, and their holistic nature. Leske observes that, “the principle of interconnectedness is assumed in which all living things are mutually dependent on each other for wellbeing and fulfilment of God’s eternal plan” [2002, 15]. Whilst the Beatitudes’ immediate context concerns human relationships and is thus perspectively anthropocentric, their underlying ethos consists of the inclusive vision of God’s Kingdom. The Beatitudes are not otherworldly platitudes but rooted in social and, implicitly given their Old Testament context, environmental justice. Bredin [2010] argues that, whilst the evils evident during Christ’s lifetime were social, today they are increasingly ecological and thus, given the holistic vision of the Kingdom, the Beatitudes should also be applied ecologically today. They are virtues upon which to build a sustainable world, where the meek who inherit the earth should include nonhuman species victimised by human greed and self-aggrandisement, where hunger and thirst for righteousness is needed in tackling climate injustice, and where being merciful and waging peace are vital ecological virtues.

Moreover, Jesus’ numerous references to animals, birds, plants and the seasonal and agricultural rhythms of nature are not simply sources of theological wisdom. They also imply moral obligations towards nonhuman creation. Attfield states that Jesus’ teaching about animals and birds, “presupposes their independent value and moral standing” [2006, 83]. If God shows such interest in care for common birds and passing wayside flowers, then humanity, in seeking to reflect God’s image, should do the same. Leske comments, “Human beings are to learn from other members of the Earth community how God takes care of his creation” [2002, 17].

One intriguing example of Christ’s nature wisdom and its implications for the value of wild nature is found in Matthew 10:29-31 (also Luke 12:5-7):

“Are not two sparrows sold for a penny?

Yet not one of them will fall to the ground apart from the will of your Father.
And even the very hairs of your head are all numbered.
So don't be afraid, you are worth more than many sparrows."

At first glance this passage displays a clear anthropocentrism in that its primary focus is God's care for humanity and there is an indubitable hierarchy of value between human life and that of sparrows. However, the passage is also ecologically remarkable in several ways. Firstly, humans are relatively, not infinitely, more valuable than sparrows. We are worth more than 'many'; undefined numerically but clearly not the total population of the cheapest bird of the time. Secondly, God cares actively for sparrows. Given the attitudes of ancient middle-eastern cultures towards nonhuman animals, Jesus' statement that God notices the death of a single sparrow is remarkable, and contains implications for the valuing of both species and of individual creatures. Finally, the Greek text of Matthew 10:29, translated literally, describes no sparrow falling to the ground "without your Father" (*anew tou Patros hymōn*). God's very self is, in some mysterious way, associated with the loss of even one individual of the commonest of species [Pao and Schnabel 2007, 327]. Whilst little weight should be placed on this possible interpretation, the passage at very least reveals God's interest in the death of the least of his creatures. What then does God think about the levels of biodiversity loss we see today? What does God think too about the unnecessary suffering of birds and animals in factory farming and animal experimentation? The fact that humans are worth more than many sparrows may imply permission to use nature for human benefit, but we do so only within a larger context of God's care for each individual of every species.

There is an implicit challenge here for those contemporary conservationists whose focus is on near-extinct or evolutionarily distinct species. The Zoological Society of London (ZSL) has identified 100 'Evolutionarily Distinct and Globally Endangered' (EDGE 2016) species as a focus for conservation work. It argues that their genetic makeup and behavioural specialisms make them a, "unique and irreplaceable part of the world's natural heritage" [ZSL 2016]. An approach that focusses in this way on "nature's most amazing animals" [ZSL 2007], has obvious appeal in terms of publicity and fundraising, but carries the danger of creating a hierarchy of value based on a concept of wild nature as a museum of evolutionary development.

Whilst there is indeed a strong argument for working to prevent unnecessary extinctions in the light of God's inclusion of all living creatures on the ark, this does not endorse a hierarchy of value within wild nature. Christ's comments on sparrows question the tendency of some

evolutionary scientists to think of species as more or less ‘developed’ (in a way that perhaps owes its philosophical origins to the Great Chain of Being) and to value more highly those species perceived to be more recent, better adapted and more sophisticated.¹⁶ Rather, each individual of every species is valued by God.

Turning to the Lord’s Prayer, Leske argues that Jesus’ encouragement to call God ‘Father’ (44 times in the Gospels) implies kinship not only with God and each other, “but also with the Earth community which God also feeds and clothes” [2002, 16]. Whilst this overstates the case, there is indisputably a deep sense of relationality throughout Jesus’ teaching, and its dimensions include all the relationships disrupted by the Fall in Genesis 3: between God and humans, within and between human beings, and with the natural world.

The relationship between God, people and the wider creation becomes explicit in the petition for God’s Kingdom to come “on earth as it is in heaven.” The Greek *gē* refers to the physical earth, and James Jones comments “The consummation of the coming Kingdom is the earthing of heaven” [Jones 2003, 20]. Similarly, Hans Küng’s phrase, “The Kingdom of God is creation healed” [1966, 214], boldly summarises the scope of Jesus’ vision. Jesus’ use of ‘Kingdom of God’ and ‘Kingdom of Heaven’ had a background in the Hebrew Bible, particularly the Psalms, where God’s kingly rule is “cosmic in scope, encompassing all creation, by no means confined to human society” [Bauckham 2011, 73]. Thus, although the concept of the Kingdom of God / Heaven was not explicitly rooted in core Hebrew Wisdom, Jesus’ use of it to include the inter-relationship of God, humanity and the rest of creation in peaceable coexistence draws deeply from the well of wisdom, as well as from Old Testament prophetic visions. As demonstrated in the parable of seeds growing to harvest amongst weeds (Matthew 13:24-30), “The kingdom does not come to extract people from the rest of creation, but to renew the whole creation in accordance with God’s perfect will for it” [Bauckham 2009, 6]. It is not an otherworldly spiritualised Kingdom but is rooted in the realities of a transformed earthly existence.

To extend the botanical metaphor, we may conclude that the seeds of an ecological Christology are sown in the Lord’s Prayer, specifically in Jesus’ words and actions regarding God’s earthy-yet-heavenly kingdom (*basileia*) and, whilst they remain hidden in the climatic conditions of New Testament society, they now find fertile soil in the contemporary context of humanity’s reckless abuse of God’s creation. If the Kingdom of God is, in its widest dimension, creation

¹⁶ One disturbing development of this thinking is the concept of human eugenics, originally developed by Charles Darwin’s half-cousin Francis Galton, valuing certain ‘races’ more highly than others [Galton 1883].

healed, then those who pray and seek for God's Kingdom to come on earth must necessarily be committed to seeking the wellbeing of every part of God's creation.

Another fascinating pericope linking Christ's ministry to Hebrew Wisdom is Mark's account of Jesus' temptations in the wilderness following his baptism. The account is recorded in all three synoptics, but only Mark includes the suggestive phrase that Jesus was "with the wild animals" (1:13). Most interpreters have assumed that the wild animals were a threat that Jesus resisted. Loader suggests that the animals were dangerous and threatening but tamed by Jesus [2002, 37-39]. Bauckham, however, reading Mark 1:13 in the light of Isaiah 11, emphasises that "with" (*meta*) has overwhelming positive associations and that "Mark's simple but effective phrase ... indicates Jesus' peaceable presence with the animals" [2011, 76]. This interpretation is contested by Heil who argues for a chiasmic structure in Mark 1:11-13, where the positive companions ('the Spirit' and 'angels') bracket those that Jesus had to resist (Satan and wild animals) [2006, 63-78].

In terms of detailed exegesis, the argument is finely balanced and the text ambiguous. Interpretation ultimately turns on the significance of wilderness as the locus of temptation. Wilderness was both a place of threat and testing for Israel before entering the promised land, and also a place of dependence, divine encounter and, in the wisdom tradition, of God speaking through natural theophanies (Job 38-41). The agrarian writer Wendell Berry describes wilderness as the place, "where we must go to be reborn – to receive the awareness, at once humbling and exhilarating, grievous and joyful, that we are part of creation, one with all that we live from and all that, in turn, lives from us" [in Wirzba (ed.) 2002, 199-200]. Similarly, based on Hebrew wisdom literature Bauckham argues "the wilderness is the non-human sphere, a place where humans cannot live, but other creatures do" [2009, 4]. In the context of Mark 1, it should also be noted that the Gospel commences with "a voice of one crying in the wilderness" (1:3) in order to prepare a path for the Messianic Lord, and there are echoes here of Isaiah 40:3, Exodus 23 and Malachi 3:1. Loader comments that, for Mark, "Wilderness was, therefore, a favourite place for great expectations and preparations for new acts of liberation that echoed those of old" [2002, 32].

Taking all this into account, we may conclude that, whilst too ambiguous to be foundational, Mark 1:13 provides a suggestive insight into the nature of Christ's rule and of the Kingdom of God (1:15) he proclaimed. Based on Hebrew wisdom's understanding of wilderness as a place of encounter with God amidst wild creatures and wild nature, and (as will be discussed shortly)

the prophetic anticipation of a Messianic figure who would establish God’s peaceable Kingdom of *shalom* throughout the earth, the idea that Jesus at the start of his ministry established peaceful relationship with previously threatening wild creatures is indeed “a Christological image for an ecological age” [Bauckham 1994, 3-21].

Looking beyond the synoptics, the authors of the fourth Gospel and the Pauline Epistles clearly identified Jesus, both as fulfilling the Hebrew wisdom tradition and, also as challenging and superseding Hellenistic wisdom. Luiz Ruscillo writes, “It is no accident that much of the “high Christology” of the New Testament is couched in wisdom terms. Christ is that “Hagia Sophia” incarnate, in whom the “new creation” is realized” [2007, 11].

The prologue to John’s Gospel demonstrates numerous parallels with Old Testament wisdom, particularly the personification of wisdom in Proverbs 8:22-35. The *Logos*, God’s creative word is, like wisdom, with God from the beginning and alongside God in creation. The theme of light, found throughout the Prologue (John 1:4, 5, 7, 8, 9, 10), has resonances both with the illumination of wisdom and with Torah (Psalm 119:105). John’s Prologue goes further than Proverbs by personifying wisdom as a physical person, but “it is the Old Testament wisdom literature that gives John his vocabulary and theological categories” [Ruscillo 2007, 13].

Similarly, Colossians 1:15-17 draws on Proverbs 8 in its description of the cosmic scope of Christ:

	Colossians	Proverbs	
First born	1:15	8:22	Brought forth first
Creator	1:16	8:27-29	Alongside Creator
Thrones / Kings	1:16	8:15-16	Kings / Princes / nobles
Before all	1:17	8:23-26	Before all
God's pleasure	1:19	8:30-31	God’s delight
Unity / craftsman	1:17	8:30	Master worker

[adapted from Ruscillo 2007, 11]

The most explicit Pauline passage regarding Christ and wisdom addresses both Hebrew and Greek backgrounds: “but we preach Christ crucified: a stumbling block to Jews and foolishness to Gentiles, but to those whom God has called, both Jews and Greeks, Christ the power of God

and the wisdom of God” (1 Corinthians 1:23-24). In the wider passage (1:18-31), Christ crucified is presented as embodying a radically new power and wisdom, overturning Jewish ideas of law (20) and Greek philosophical wisdom (22) through the apparent foolishness of the cross. Paul does not negate Hebrew and Greek wisdom but rather the anthropocentric tendency to put one’s trust in independent human agency instead of in God. Alongside John 1 and Colossians 1, 1 Corinthians 1 is a profoundly Christocentric passage, identifying the person and work of Jesus Christ as the source of divine wisdom and power. As with the divine speeches in Job, it is a profoundly de-centering text, demolishing anthropocentric concepts of wisdom in favour of a total reliance on God in Christ: “Let the one who boasts boast in the Lord” (1:31).

Thus, when New Testament accounts of Christ’s life and work are read in the context of Hebrew wisdom, we see the place of nonhuman creation not only reflected but reinterpreted in Jesus Christ. Christ is more than a wise Rabbinical teacher through whom creation becomes a storehouse of imagery for interpreting Torah and for guidance in right living. In his intimate knowledge of creation, his insight into God’s care for every part of it, his companionship with wild animals and supremely in the emergent vision of his cosmic relevance, the New Testament sees Christ as the source and focus of a recasting of wisdom in the light of the incarnation, cross and resurrection. Creation’s whole *telos* is to be interpreted Christocentrically, with implications for the value of, and relationship between, all creatures, human and nonhuman.

God’s Kingdom and the Messianic scope of Shalom

Theologically speaking, teleology, eschatology and the prophetic tradition are closely connected. Old Testament prophecies concerned both forthtelling and foretelling: prescriptive judgment on contemporary contexts and also predictive elements concerning God’s future plans within and beyond history. The Gospel narratives concerning Jesus as the Messiah drew heavily on prophetic visions of a Messianic era of justice and peace, summarised in the concepts of ‘shalom’ and ‘jubilee’. In virtually all the prophetic accounts this vision encompassed not only spiritual and socio-economic dimensions (renewed relationship with God and neighbour), but also an ecological restoration, pictured in terms of safety from wild beasts and a return to the prelapsarian vegetarian state of the animal kingdom.

Thus, in Isaiah 11:6-9, wolves and lambs, leopards and goats, calves and lions and children, cows and bears, infants and snakes will all live in harmony, “for the earth will be filled with the knowledge of the Lord as the waters cover the sea” (11:9b). Although Messiah is not explicitly mentioned, the passage became associated with messianic expectation, and is linked to an ecotopian vision of reconciliation between humanity and wild nature, together with, “a picture of gentle and beneficial service to wild animals” by human beings – as seen in the image of a small child shepherding wild animals (11:6b) [Bauckham 2009, pp.2-3]. Whether this is taken literally or as a visionary account of an ecologically renewed future beyond the author’s imagination (an issue considered in the next chapter), its significance lies in the creation-encompassing breadth of its vision.

It is the contention of this chapter that the apparent paucity of ecological references in the Gospels disappears when they are read in the light of Old Testament wisdom and Messianic prophetic expectation. As Richard Hays has demonstrated, whilst each Gospel is stylistically unique, all draw richly on the Jewish scriptures, not only with direct quotation but with allusion, imagery, recapitulation and metalepsis in order to reveal “the way in which Israel’s Scripture has always been mysteriously suffused with the presence of Jesus” [2016, 289]. Similarly, whilst modern readers may surmise that the Gospels contain little directly about creation, a closer reading reveals numerous ecological references, allusions and images.

One example is Christ’s birth narratives in the synoptic Gospels. These are usually considered as of ecological significance only with regards to the doctrine of incarnation. However, when seen in the context of Messianic expectancy, suggestive clues appear. Mary’s song of praise, the Magnificat (Luke 1:46-55), echoes Hannah’s song in 1 Samuel 2:8, full of messianic hopes for justice and righteousness that populate the prophetic vision. Her words proclaim God’s preferential option for the *anawim*, the landless, dependent ‘humble poor’ who have no human support and cry out to God for help, and her hymn of praise anticipates the agenda that Jesus would set for himself in Luke 4:18-19. Similarly, the role of John the Baptist in preparing the way is built upon Old Testament expectation of a Messianic herald. Also, often overlooked, because it is implicit in these passages, is the prophetic ideal of *shalom* or harmony throughout creation which underlies the Magnificat, John the Baptist’s role, and Jesus’ Nazareth manifesto.

The vision of *shalom* becomes explicit in the angelic appearance to shepherds outside Bethlehem (Luke 2:8-15). Shepherds were frequently amongst the marginalised *anawim*, living on society’s fringes and performing an unsociable, menial role. They contended with very real

threats from wild animals. Yet, it was to them that angels proclaimed glory to God and ‘peace on earth’ (2:14), fulfilling Messianic hopes of a Davidic King (2:11). The English term ‘peace’ (*eirene* in Greek) fails to convey the scope of the Old Testament concept of ‘shalom’. Its Hebrew background included an all-encompassing sense of well-being, wholeness and reconciliation transcending the spiritual, social, economic and ecological realms and flowing from Godself [Westermann 1992]. It is “the intended state of peace and wholeness that all of God’s creation is meant to experience” [Wytsma 2013, 24]. Is it far-fetched to imagine that first century Jewish shepherds, reared on prophetic vision of shalom, and living with the threat of attack from wild animals, linked the angels’ proclamation of ‘peace’ embodied in the birth of Christ-child, to the Isaiah 11 and Hosea 2 visions of harmony throughout creation?

When Jesus inaugurated his ministry by reading in the synagogue from Isaiah 61:1-2, he built on Jewish messianic expectation with its spiritual, social, economic and also ecological background. Although the passage mentions neither Messiah nor nonhuman creation specifically, it explicitly references the year of Jubilee (“The year of the Lord’s favour” Luke 4:19). As discussed in the previous chapter, Jubilee (Leviticus 25-26) built upon the Sabbath, instituted in creation (Genesis 2:2-3) and reaffirmed at Sinai (Exodus 23:10-12), as a focus for dethroning all human work in favour of the worship of God.

Sabbath and Jubilee were profoundly theocentric institutions, establishing that work, property (including domestic animals), time and land all ultimately belong to God. There were both social and ecological dimensions to this. During the Sabbath year, fields, vineyards and olive groves were to be left untended so that not only poor people but also “the wild animals” might feed in peace (Exodus 23:11) [Kinsler and Kinsler 1999, 12]. Whether or not the Jubilee year was ever practised is less significant than its place in first century messianic expectation. The land belonged to God, not to those who farmed it (Psalm 24:1) and Jubilee proclaimed a deeply theocentric view of political and natural ecology. As Lowery states, “Sabbath year, like the creation-sabbath narrative in Genesis 1, rejects an overly anthropocentric view of the world” [2000, 61]. By relativizing land-ownership, Sabbath and Jubilee created a vision that was deeply theocentric and morally heterocentric, enabling human beings to see their reliance on the fragile goodness of nature and their responsibility to protect its integrity. This was at the heart of what Jesus proclaimed in his first public act in the synagogue in Nazareth.

In terms of the implications for this thesis, the Messianic visions of a peaceable Kingdom of *shalom* and Jubilee mean that humanity must never instrumentalise or objectify wild nature. All

of creation, human and nonhuman, derives its value from God and is included within a Messianic vision of harmonious interdependence. The radical Jubilee vision of all land, property and creatures ultimately belonging and returning to God undermines economic valuations of nature. Attempts to put a financial value on species or ecosystems based on what they accomplish for human thriving is effectively nullified by Jubilee economics, which recalibrates the scales so that true value can only be measured in relation to God. This does not necessarily mean that wild nature should never be included in economic assessments but that these should not be based on anthropocentric measures alone, and that such valuations should be seen as tentative and partial indicators of economic benefit, never indicative of true value.

‘Difficult’ passages

There are a small number of passages in the Gospels that have negative ecological overtones. Two are particularly problematic for an ecological Christology. The first is Matthew 21:18-22 (also Mark 11:12-14) where Jesus cursed a fig tree that was not bearing fruit and it immediately withered. Mark notes that it was not even the fruit-bearing season. Some commentators have perceived a hungry, tired Jesus taking out his irritability on an inanimate object, and establishing his authority over nature by instrumentalising it. However, all is not as it first appears. Jesus clearly approached the tree expecting it to be fruit-bearing before finding it covered only in leaves. Fig trees in Israel bear fruit in several seasons and generally a tree covered in green would suggest concealed fruit [Bruce 1981, 73-74]. Perhaps Jesus had found a tree which was failing to fulfil its natural fruit-bearing function.

In Matthew 7:15-20 Jesus compares false prophets to trees that do not bear good fruit and are to be cut down and thrown into the fire. Every part of God’s world is created to play a particular role within the complex ecological systems that have evolved under God’s design. Failure to play its part, whether as tree, animal or human, is a failure to recognise God’s lordship. Jesus may have cursed the tree in part to make a point to his human audience about the consequences of rejecting God’s invitation to life in all its fullness. The implication is that people as well as fig trees may alike be judged if they fail to be fruitful in God’s kingdom.

The second passage, in Mark 5:1-20 (also Luke 8:27-38; Matthew 8:28-34) is the cursing of the Gadarene swine. Bertrand Russell used this text to evidence God’s moral fallibility in his argument *Why I am not a Christian* [Spade and Strindlund 2012, 101]. Jesus exorcises a demon-possessed man and sends the evil spirits into a herd of about 2,000 pigs, who career over a cliff

and drown in the lake. Here, as Edward Echlin puts it, “God in Jesus seems almost indifferent to his creatures” [1999, 79].

From Augustine onwards, some commentators have argued that this passage legitimises indiscriminate human exploitation of animals [Honderich 2005, 37]. To Echlin, the passage so undermines the principle that God “has compassion on all he has made” (Psalm 145:9), it should be ignored [1999, 78-79]. However, simply to dismiss ‘inconvenient’ texts is inadequate from a canonical perspective. One alternative is to reject literal interpretation in favour of coded politics, arguing that demonic Legion represents Roman invaders stationed in the Decapolis region whose ensign was a boar and who were destined for self-destruction [Leander 2013, 201-220]. In contrast, Michael Gilmour makes a well-argued case for an ecological re-reading, first admitting, “it is awkward to attribute the destruction of animal life to Jesus” [2014, 85], but then suggesting the pigs are active agents, sacrificially cooperating with Jesus in destroying the demonic threat to God’s creation [ibid, 86-87].

In the end, the passage must be acknowledged as difficult and its detailed interpretation inconclusive. The liberation of the demoniac is a small part of the bigger narrative of God’s Kingdom moving forward in deed and word. Commenting on the spiritual battle in the Gospels, Jürgen Moltmann states, “When Jesus expels demons and heals the sick, he is driving out of creation the powers of destruction, and is healing and restoring created beings who are hurt and sick. ... Jesus’ healings are not supernatural miracles in a natural world. They are the only truly ‘natural’ thing in a world that is unnatural, demonized and wounded” [1990, 98-99]. Thus, whilst the death of 2,000 pigs remains uncomfortable in seeking an ecological Christology, its context is the cosmic battle for the renewal of all creation. What is unnatural is the presence of evil and its power over both human and animal life. Christ and his liberative cleansing work restore life and banish fear and captivity.

Christ as Lord of creation

We shall now look more broadly at Christ’s miracles in the Gospels, in terms of their relevance for an ecological Christology. Whilst the synoptic Gospels are not structured as thematically as John, they nevertheless seek to establish who Jesus is in terms of his authority over the forces that control both human life and the natural world. Thus, feeding crowds, healing the sick, deliverance from demonic powers and resurrection from the dead all demonstrate Jesus’ power over natural forces. He is revealed as Divine in his capacity to address the forces of nature as

he turns water into wine, feeds crowds of thousands, restores sight and shrivelled limbs, cleanses from leprosy, and liberates from demonic powers.

Jesus' power over nature remains implicit in most of the miracles but becomes explicit in the stilling of a storm on Lake Galilee (Mark 4:37-41; Matthew 8:23-27; Luke 8:22-25). Faricy sees this story, and the disciples' subsequent recognition of Jesus as the one who has power even over the forces of nature, as sufficiently paradigmatic to form the title of his book, *Wind and Sea Obey Him* [Faricy 1982]. Commenting on Mark's twin accounts of Jesus stilling the storm and walking on lake Galilee (Mark 6:45-54), he states, "We can find in these two passages an implicit but clear reference to the credal account of creation in the book of Genesis. Just as the Creator dominated and ordered the chaotic sea 'in the beginning', so now Jesus dominates the sea and orders it to be still" [ibid, 44].

The stilling of the storm also has symbolic references to Hebraic concepts of the sea as a place of chaos and battle against potentially evil forces. Jesus' contemporaries would have been well aware of Nahum 1:4 (God rebuking the sea), Job 9:8 (God walking on the waters), Job 26:12 (God's word stilling the sea), Psalm 77:16-19 (God's path through the mighty waters) and Psalm 104:7 (God rebuking the waters). No wonder they reacted in astonishment to the implication that Jesus was demonstrating the power of the Almighty Creator. Writing in an era of anthropogenic climate change, where extreme weather events are predicted to increase in frequency and rising sea levels expected to cause problems for humanity and wild nature alike, the power of Jesus over the forces of nature deserves greater theological reflection as a motif for Christian engagement with these issues.

This examination of the synoptic Gospels has demonstrated suggestive possibilities for an ecological Christology. Whilst Jesus' words and works are primarily addressed to human redemption, they rest on a foundation of Hebrew wisdom and the Messianic vision of shalom recast in the language of the Kingdom of God. God's purposes embodied in the life and teaching of Christ are not only spiritual and social, but implicitly deeply ecological. Whilst the presenting issues in the first century concerned human life and society, the synoptic Gospels provide ample space to apply Christ's message to today's radically different context of ecological collapse and environmental dystopia. As we now turn to examining the theological reflections of the early Church upon the cosmic consequences of Christ's coming, we will see the parameters of an ecological Christology for our current age become even clearer.

The Incarnate *Logos* and the Cosmic Christ

As the post-ascension Christian community reflected on the significance of Jesus Christ, awareness grew that he was not only a first-century messianic figure but his relevance transcended the boundaries of space and time. In the New Testament writings attributed to John and Paul we see the emergence of a sophisticated reflection on the significance of Christ. Some implications of that reflection were evident to the authors themselves whilst others, including the ecological consequences of Christ's Lordship, can only be seen from the perspective of a radically altered contemporary context. It is this Johannine and Pauline understanding of Christ's cosmic significance that provide the contours into which the otherwise fragmentary ecological evidence of the synoptic Gospels may fit.

The Gospel of John is perhaps the most theologically sophisticated book in the New Testament [Culpepper 1988]. John¹⁷ is selective in his account (John 21:25) and structures his writings thematically, such as around the 'I am' sayings. He consciously re-interprets the Hebrew Scriptures in the light of Greek thought and appears, in reshaping Torah, to know that he is in some sense writing scripture himself. This can be seen at the start of the Prologue, *En archē ēn ho logos*, where the opening words of Genesis are combined with the philosophically rich Hellenistic concept of the 'Logos' as the organising principle within creation.¹⁸ In addition, typically of John's multi-layered approach, there are allusions to the personification of Wisdom delighting and participating in creation at God's side (Proverbs 8:30). Thus, from its opening words, John's Gospel portrays Jesus the Christ as pre-existent Creator. Richard Hays states that, in John, "all creation breathes with his life" [2016, 344].

The Logos is, in William Temple's words, "The word of the Lord by which the heavens were made. It is also the Rational Principle that gives unity and significance to all existing things" [1947, 3]. The historical Jesus is simultaneously the source and fulfilment of Torah, of Hebraic Wisdom and of Greek philosophy. Whilst the author's intent was probably apologetic, the richness of John's Prologue gives ample space to reflect on the cosmic and ecological dimensions of Jesus Christ, God's Logos. Christ was the origin (John 1:1) and source (1:3) of

¹⁷ The personal pronoun is used for convenience. Debates regarding whether the Gospel of John is the product of a single author or a Johannine community do not affect the conclusions of this thesis.

¹⁸ The debate around the influence of Philo and Hellenistic Judaism on John's use of 'Logos' is incidental to this thesis. I take the view that the author of John's Gospel boldly reinterpreted 'Logos' in ways that neither pagan Greek nor Hellenistic Judaism had contemplated [Hagner 1971].

all creation, and thus the whole created order finds value and purpose in relation to him. Although there is alienation within creation (John 1:10 “Though the world was made through him, the world did not recognise him”), this is due to humanity’s preference for darkness over light (3:19), and will ultimately be overcome, because the Logos is also the light of the world (1:4, 5, 9; 8:12).

The implications of John’s Prologue are profound for our understanding of both incarnation and Christology in relation to ecology. In John’s Logos, the transcendent God of Genesis 1-2 has become immanent within the physical world. John affirms the Hebraic distinction between God and creation, maintaining nature’s de-divinization, yet radically reinterprets the tradition in terms of God’s intimate identification with materiality. Faricy states, “In the theologies of John and Paul, God’s transcendence is still maintained, although now he is understood also as immanent to the world in Jesus” [1982, 7]. Specifically, “for John, it is not Christ who is cosmic, but the cosmos that is Christic” [ibid, 6]. This concept of a Christic cosmos will be explored further in relation to Paul’s writings. Its implication is far-reaching for Christian engagement with ecological concerns: caring for creation is not solely based on the creational mandate (Genesis 1:26-28) but arises from the nature and Lordship of Jesus Christ in relation to the whole created order.

The term that John chooses for the incarnation of the Word is instructive. If the focus was anthropocentric, then surely the Word would have become *ánthrōpos*? Genesis’ designation of humanity as *imago Dei* would appear to give ample grounds for human exceptionalism. However, in John 1:14 the term used is *sarx* or ‘flesh’, an everyday term for animal flesh. Gregersen argues that in contemporary Greek thought, *sarx* could variously mean a physical human body, or ‘fleshly’ in a negative corruptible sense (as in John 3:6), or even “the whole material world” [2015, 233], and that this latter sense, favoured by the Stoics, is implied by John’s Prologue. In speaking about the *Logos* becoming *sarx*, John was re-interpreting both Hebrew thinking on creation’s post-Edenic alienation from God, and Stoic ideas about the possibility of the divine principle entering material creation.

Given John’s theological sophistication, he surely intends us to understand that the incarnation not only describes God becoming *Homo sapiens* but signifies God entering into and blessing the whole creation with the divine presence. Just as the same Hebrew phrase, *nishmat chayyim* (‘living being’) is used in Genesis 2 for both human (7) and nonhuman (19) creatures enlivened by God’s breath, so John emphasises the essential familiarity of all fleshly creatures honoured

by Christ's incarnation. Clough observes of *sarx*, "It is ... an inclusive term for all living things, with roots in the Hebrew *basar*, used frequently in the Old Testament to refer to all living creatures" [2012, 85]. Nor can it be argued that John 1:14 is anomalous. The Pauline and Johannine letters use the same term for the incarnation (Ephesians 2:14-15; 1 Timothy 3:16; 1 John 4:2). Gregersen writes, "The flesh that is assumed in Jesus Christ is not only the particular man Jesus but the entire realm of humanity, living creatures, and earthly soil" [2015, 234]. Elizabeth Johnson agrees, stating "The *sarx* of John 1:14 thus reaches beyond the person of Jesus and beyond all other human beings to encompass the whole biological world of living creatures and the cosmic dust of which they are composed" [2015, 138].

The implications of Christ's incarnational identification with the whole created order are fundamentally important for the treatment of wild nature, and for ecological anthropology. Oliver O'Donovan writes of the incarnation: "the whole created order is taken up into the fate of this particular representative man at this particular moment of history, on whose one fate turns the redemption of all" [1986, 15].

The incarnation emphasises that distinctions within nature, whether based on sentience, evolutionary science, or philosophical concepts, are secondary to the commonality shared by the whole created order. Whilst there may be relative differentiation between the value of human and other life (as in Matthew 10:29-31), there can be no absolute difference when all creatures have been affirmed in the incarnation. As David Clough writes, "The doctrine of the incarnation does not therefore establish a theological boundary between humans and other animals; instead it is best understood as God stepping over the boundary between creator and creation and taking on creatureliness" [2012, 103].

In terms of attitudes to topics as diverse as animal husbandry, meat production, agricultural policy, biodiversity conservation and poverty alleviation, the incarnation implies God's valuation of, and redemptive intent for, all creatures. All things are created from dust (Genesis 2:7), and all things are sanctified by the incarnation of Christ. Bauckham states, "The incarnation makes the incarnate One integrally part ... of the whole of material reality – not only animals (with whom Jesus shares genetic continuity) but also plants and inanimate nature" [2015, 35]. Thus, through creation and incarnation, matter is hallowed and living creatures are animated with divine breath. Nature, whether wild, domesticated or human, must never be objectified or instrumentalised, but valued and respected for its integrity. It is incumbent on

theologians and Christian leaders to communicate these implications more widely and reflect more deeply upon their consequences.

The incarnation of God as *sarx* rather than *ánthrōpos* further demonstrates that anthropology is a subsidiary discipline to ecology. As with the *imago Dei*, the uniqueness of Christ becoming a *human* body is less about hierarchy than about a distinctive task for humans within the created community. It is “a role of responsibility that treasures, as God does, the diversity and integrity of other creatures” [ibid, 48]. Humanity, like the incarnate Christ, is to show leadership through service and self-sacrifice, and so reflect the character and image of God.

Another key term in John’s Prologue is *kosmos* or ‘world’. In 1:10 we read that “the world was made through him.” In a typically multi-layered Johannine manner, the meaning of *kosmos* depends on context. David Atkinson states, “Sometimes John means the world God loves; sometimes the world of all people; sometimes the world in the sense of ‘worldliness’ which needs to be resisted and ‘overcome’” [2015, 7]. Balabanski identifies four major meanings: the ‘world’ or context into which light comes (1:10), the totality of creation (1:3, 1:10), the world of human rather than divine action - in itself morally neutral (John 3:16), and the sinful world of fallen creation in contrast to the world above (8:23, 18:36) [2002, 89-94].

This latter meaning of *kosmos* as a world of moral failure separated from God has significantly influenced the growth of dualistic theologies. Confusion between Johannine understandings of ‘world’ has led to negative associations regarding the physical world. Hellenistic dualism and Gnosticism regarded material creation as inferior to spiritual. Yet, such an interpretation is implausible given John’s understanding of incarnation. The *kosmos* into which God became flesh was the created physical world which the Creator declared ‘very good’ (Genesis 1:31). Balabanski warns of a “maelstrom of dualistic impulses” and continues “We are therefore in danger of importing the cosmic dualism – that operates primarily in the fourth semantic category set out above – into all the other categories.” [ibid, 90]

The Johannine notion of a fallen world makes sense only when we recognise that it does not refer primarily to the material world but to the moral state caused by humanity’s rejection of God. Balabanski notes a crucial distinction between John’s use of *kosmos* in relation to sin, where the context is always that of humanity, and in relation to salvation where the context is cosmic, “because the sinfulness of humanity impacts upon the entire Earth community, rendering Earth also in need of salvation” [ibid, 92]. In the particular context of contemporary

Hellenistic Judaism, *kosmos* encompasses the totality of heaven and earth together (contra dualism), and specifically includes both *gé* (the earth as a whole, and as soil or biotic community, translating the Hebrew *erets*) and *bios* (the living world of creatures).

Moving to John 3:16-17, we read that God so loves the *kosmos* that he sent his Son, to the end that all who believe in him might be saved. Here there is no negative sense whatsoever in *kosmos*. The Son has not come to judge the world (3:17). The world that God's loves is, in immediate context, the arena of God's salvific action and the world of human society, since humanity is invited to respond by believing in Christ. However, it is by no means fanciful, in the light of the Prologue's vision of the cosmic scope of Christ as Word and Light of God, Creator and Redeemer, to see an additional cosmic dimension within John 3:16-17. The world that God loves is the world of land, plants and living creatures which the Word spoke into being, into which He has become flesh, and which is included within God's redemptive plans in Christ. As Craig Koester states, in relation to John 3:16, God in Christ "offers his love to a world estranged from him in order to overcome its hostility and bring the world back into relationship with its Creator" [2008, 81].

The redemptive scope of Christ's work clarifies as we move from Johannine to Pauline texts. There are inevitable differences of style and emphasis between the two schools of writing. Faricy contrasts a Johannine "progressive fulfilment of the cosmos through man's faithful response to the Word of God" with a Pauline "progressive fulfilment of the cosmos through the incorporation of all things into Christ" [1982, 8]. This is not to say that John is more anthropocentric than Paul. Rather, he places greater emphasis on the active involvement of proto-ecclesial communities in response to God's work in Christ.

What is most remarkable is how, in both the Johannine and Pauline corpora, there is a growing emphasis on understanding Christ in cosmic terms. Sittler writes, "There is clearly a momentum and directionality at work in the scope and variety of the New Testament witness to Jesus as the Christ. ... This circle spins out in larger and larger orbits until, in Colossians, chapter 1, and in the great rhetorical passage in Ephesians, chapter 1, it enfolds "all things" as destined in Christ to be interpreted as existing "to the praise of His glory" [1972, 334].

Within the Pauline corpus, this can be found repeatedly. For instance, the Christocentric doxology of Romans 11:33-36 speaks of Christ as encompassing all creation, stating: "from him and through him and for him are all (*panta*) things" (11:36). 1 Corinthians 8:6 speaks of

the origin of creation in terms of “one Lord, Jesus Christ, through whom all things came and through whom we live.” Similarly, Ephesians 1 speaks of Christ as the unifying force at the heart of the cosmos in terms of God’s purpose “to bring unity to all things in heaven and on earth under Christ” (1:9-10), and later of the Church as “the fullness of him who fills everything in every way” (1:22-23). Philippians 2:5-11, having described Christ’s kenotic descent into the incarnation and crucifixion, proclaims his return to cosmic supremacy: “Therefore God exalted him to the highest place and gave him the name that is above every name, that at the name of Jesus every knee should bow, in heaven and on earth and under the earth, and every tongue acknowledge that Jesus Christ is Lord, to the glory of God the Father.”

In the development of Pauline Christology, the place of Christ as source, significance and destiny of the whole creation, and the particular role of the Church as Christ’s body on earth in relation to creation are become central to this thesis. These themes become clearer as we look at two key passages, Colossians 1:15-23 and Romans 8:18-25.

Colossians 1 and Romans 8

When Joseph Sittler addressed the World Council of Churches in 1961, in a highly influential speech, he centred his reflections on Colossians 1:15-20. He observed that “These verses sing out their triumphant and alluring music between two huge and steady poles – ‘Christ’ and ‘all things’. ... For it is here declared that the sweep of God’s restorative action in Christ is no smaller than the six-times repeated *ta panta*” [quoted in Bouma-Prediger 2001, 110]. In the context of a first century world dominated by elitist Hellenistic philosophy, Paul’s association was bold and radical. It asserted that an uneducated Galilean who died in disgrace was both eternal Creator and teleological destiny of the cosmos. Paul’s motivation was both apologetic and profoundly doxological. Colossians 1:15-20 is a credal hymn of praise, a deeply theological meditation on the experienced reality of the scale and scope of Christ’s person and work.

The passage begins by referencing Genesis 1:1 and 1:28, seeing Christ both as Creator and ‘image of God’. As Creator all things are created in him (*en autō*) and for him (*eis auton*). The phrase ‘in him’ has given rise to much speculation. Moltmann argues for a Trinitarian ecological panentheism, writing “creation is a trinitarian process: the Father creates through the Son in the Holy Spirit. The created world is therefore created ‘by God’, formed ‘through God’ and exists ‘in God’” [1993, 9]. God is not to be confused with creation, but rather an all-

enveloping God has withdrawn in order to make space for creation to develop, and ultimately the fullness of creation will become reabsorbed into the divine fullness.

More significant for ecological Christology is the notion of creation's purpose and fullness residing in Christ. If all things are created *for* him, they have value independently of their usefulness or relevance to human society. This value is intrinsic in its independence from humanity, yet also contingent in relation to Christ. Colossians 1:17 develops this further in stating that all things hold together in Christ (*pánta en autō synestēken*). Christ is the personal force who brings about cosmic coherence. Writing about Ephesians 1:10, which similarly speaks of all things summed up in Christ, Bauckham writes, "This verse portrays Jesus Christ as the unifying centre of the cosmos. ... a christocentric universe is not an anthropocentric universe but a universe centred on the God who through incarnation participates in the interconnected life of all his creatures" [2015, 51]. This is a profoundly ecological image, since ecology is a science of how all elements in an ecosystem relate to each other. Paul informs us that, ultimately, they cohere in Christ. It is an image of a truly Christic cosmos.

Moreover, if the fullness (*plérōma*) of God is found in Christ (1:19; also John 1:16 *inter alia*), this has far-reaching implications for the created order. David Ford notes how the Pauline use of *plérōma* is developed elsewhere: "The author of Ephesians seems to be improvising and enlarging on this theme and weaving together God, Christ, church, Christian living and the whole cosmos into a dynamic soteriology of abundance" [1999, 114]. This insight combines Christ as creator and redeemer, encompassing humanity (individuals, the church) within an ever-expanding circle of God's fullness in Christ. Similarly, Faricy proposes that, "In St Paul's writings, the meaning of Pleroma seems to be that all things are created in Christ, reconciled in him and find their fulfilment in him, in whom there is the fullness of God and also, in some way, of everything which exists" [1982, 10]. Whether or not this is interpreted in panentheist terms, all elements of God's creation are encompassed within the fullness of Christ. There is a centrifugal urgency to this vision of *plérōma*, constantly directing energy heterocentrically away from the self towards God's widest purposes in creation and salvation.

Yet, if the impetus is towards God's cosmic *plérōma* in Christ, the moral application is stubbornly local and contextual. Ford writes, "Ephesians testifies to a salvation which is both cosmic in scope and utterly focussed through ordinary living" [1999, 116]. Tom Greggs, echoing Kelsey's *Eccentric Existence*, states: "humans are called to act wisely for the well-being of the proximate settings in which they dwell" [Kelsey 2009; Greggs 2012, 453]. The

cosmic scale of Christ's work is not for philosophical contemplation alone but provides inspiration for practical engagement, seeing Christ's creative touch and saving work in every creature we encounter under heaven, every ecosystem with which our lifestyles engage.

At the heart of Christ's work in Colossians 1 are two interwoven dynamics, one creational and the other redemptive. As Christ the Creator encompasses the purpose of the whole creation, so Christ as crucified Saviour provides current and future hope for all creation. In Sittler's words, "Unless you have a crucified God, you don't have a big enough God" [1981, 119]. It is Christ's blood, shed on the cross (1:20), which enables the reconciliation of all things on earth and in heaven. One of the terms used is *eirēnopoīēsas* or 'making peace', and as observed earlier its root, *eirēne*, corresponds to the Hebrew 'shalom.' The peace-making that God-in-Christ accomplishes on the cross is as wide as the scope of the prophetic vision of shalom. Thus, in Bouma-Prediger's words, "Creation and redemption are two acts of one divine drama. ... Soteriology is earth-affirming" [Bouma-Prediger, 2001 109].

For Moltmann, "The cross demonstrates God's solidarity with a suffering creation, God's vicarious love for the godforsaken world threatened by annihilation, and the protest of divine love against the suffering of creation" [Quoted in Conradie 2012, 138]. Thus, the crucifixion, insofar as it encapsulates the suffering of all created beings, should engender in Christ's followers a deep sense of compassion and lament at the suffering of creation. This is echoed in Romans 8 where the 'groaning' of creation (8:22) is accompanied both by a divine groaning (8:26) and by the groaning of God's Spirit within God's children (8:23).

If God, humanity, and creation are joined in the suffering of the crucifixion they are also united in the redemption it achieves and the new life of resurrection. The bodily resurrection both of Christ and of redeemed humans (1 Corinthians 15) comprises the firstfruits of creation's renewal in Christ. As Ken Gnanakan writes, "Creation will no longer groan, for its Saviour has granted liberation from its bondage to decay (Rom. 8:21)" [1999, 115]. In the current age, caught between Christ's saving work and its fulfilment, signs of redemption may appear few and far between. Yet, we can be assured that this reconciliation, "accomplished in principle on the cross, works itself out gradually in history towards the end of time, when all things will find their definitive reconciliation in Jesus" [Faricy 1982, 49].

Colossians 1 also addresses the place of the Church in relation to creation, and thus the church as a community is significant for ecological anthropology. If Christ is the perfect image of God,

he exemplifies what it means for humanity to reflect God's image. If humanity's creation as *imago Dei* is primarily vocational rather than ontological, then Christ's incarnation, life and redemptive work redefine and focus that vocational task [Bookless 2014]. Its scope must be nothing less than the extent of Christ's work. Proclaiming the Lordship of Christ over the whole creation becomes a primary missiological and doxological task, rather than marginal or ancillary. Quoting Bouma-Prediger again, "Because Christ died on a cross, we eschew domination and, by contrast, rule by serving others, including the earth. ... Cosmic redemption lies at the very heart of the gospel" [2001, 125].

Moreover, Pauline theology makes clear that the Genesis 1:28 mandate now belongs not just to individuals but in a particular way to the Church: "the church has a central position in this plan" [Faricy 1982, 8-9]. If the Church is "the fullness of him who fills everything in every way" (Ephesians 1:22-23), then ecclesiology needs to be redefined ecologically. Brazilian theologian Elmer Flor argues, "In Ephesians 1 the focus lies on the role of Christ in creation and redemption, rather than on Christ's role in conquest and rule" [2002, 142]. Christ's headship is relational rather than hierarchical, which is why the New Testament consistently uses the image of a body organically joined to its head. This is reiterated as we now compare Colossians 1 to Romans 8:18-25.

In Colossians 1, Christ's headship in the Church (1:18) and in creation (1:19-20) are closely related, and the densely-packed theology of 1:15-20 is explicated in more detail in 1:21-2:15. Christ is both head of the church, which is his body (1:18) and also head of the cosmos, which is also in some sense his body (2:9-10). In Romans 8:18-25 the role of the church is explained further. Creation waits in eager expectation (*apokaradokia*) for God's sons to be revealed (8:19). 'Sons of God', in Romans 8, includes all women and men adopted by grace through faith into God's family, the church (8:14-16). Paul is making the remarkable assertion that nonhuman creation is waiting for the church. In the words of N. T. Wright, "The whole creation is waiting in eager longing – not just for its own redemption, its liberation from corruption and decay, but for God's children to be revealed: in other words, for the unveiling of those redeemed humans through whose stewardship creation will at last be brought back into that wise order for which it was made" [2007, 213].

The incorporation of the whole created order within Christ's redemptive work is restated in Romans 8:20-21: "the hope that the creation itself will be liberated from its bondage to decay and brought into the freedom and glory of the children of God". The precise relationship

between the saving work of Christ and the role of redeemed human actors is not explored, but the text affirms that redeemed humanity has a significant role in actualising the liberation of nonhuman creation. The passage is thus teleologically and axiologically non-anthropocentric insofar as the scope of God's salvific purposes in Christ encompasses the whole of creation. Yet, there remains a degree of instrumental anthropocentrism [Clough 2012, xvii-xviii], since it appears that the means of creation's redemption involves human agency. Most importantly, however this is subsumed within an overarching theo-eco-centric purpose within which humans may be chosen agents but within a divine plan and purpose that includes all creation.

Conclusion

This chapter has argued that Jesus Christ must be at the heart of a biblical approach to environmental issues. An ecological Christology is essential to an authentically *Christian* reflection on matters of ecology, sustainability and conservation. Moreover, whilst the immediate context of New Testament authors was the relevance of Christ for humanity, the implications of their Christology, particularly as Johannine and Pauline understandings of the cosmic dimensions of Christ's work developed, leaves ample scope for addressing today's ecological challenges. I. Howard Marshall has argued that, whilst the infant New Testament church was preoccupied with survival, growth and internal issues, the nascent seeds of socio-political engagement were also sown, and "with the growth of the church such activity becomes possible and mandatory. We are reminded that 'everything that was written in the past was written to teach us' (Rom.15:4)" [2000, 96]. The same is true for ecological concerns.

The western theological tradition has often been hamstrung by a dualistic framework of interpretation denigrating material creation, by a false anthropocentrism failing to recognise humanity's creaturely commonality, and by inadequate Christology and soteriology which have respectively been over-spiritualised and over-individualised. In the light of the urgency of the ecological crisis facing God's creation, it is time for the global Christian church to recover an understanding that to be Christocentric must necessarily encompass what Howard Snyder calls God's "immense divine plan for the restoration of all creation" [2011, 94]. This plan is nothing less than what Peter in Acts 3:21 describes as "the time ... for God to restore everything, as he promised long ago through his holy prophets." It is a Christocentric cosmic vision that fulfils the dreams of Isaiah and Hosea for a restoration of peaceful relationship throughout the whole of creation.

Returning to the key questions this thesis seeks to address, ecological Christology brings a subtle but significant change of focus to the answers the Old Testament gives:

1. Why do we value wild nature?

After reading the Gospels and Epistles, we are compelled to answer this question: ‘Because Christ is Lord of all creation!’ To proclaim ‘Jesus is Lord’ is not only a statement of personal or corporate allegiance, but a commitment to bringing the Lordship of Christ into every area of creation, until that day when “every knee should bow, in heaven and on earth and under the earth, and every tongue acknowledge that Jesus Christ is Lord, to the glory of God the Father” (Philippians 2:10-11).

In the light of John’s Gospel and the Pauline Epistles, nature’s value is redefined Christocentrically. Christ is the creator (John 1:3), meaning God’s “eternal power and divine nature” (Romans 1:20) are revealed in creation’s diversity and beauty. Secondly, Christ is sustainer of the whole cosmos: both humanity and wild nature “hold together in him” (Colossians 1:17). Thirdly, Christ’s incarnation as *sarx* (John 1:14) affirms the whole material creation as sanctified by God’s presence. Finally, the death and resurrection of Christ reconcile “all things, whether things on earth or things in heaven” to God (Colossians 1:20).

The New Testament, in the cosmic Christology articulated by John and Paul, makes explicit the hints we have discerned in Old Testament wisdom and covenant literature, and in the synoptic biographies of Jesus. Wild nature is far more than a stage on which the human drama is to be played out, or a resource for human enjoyment and exploitation. Rather, wild nature is fundamental to God’s purposes from creation to redemption. Although biblical narratives are inevitably perspectively anthropocentric, and are functionally anthropocentric in terms of human agency, this is directed towards a purpose that is never axiologically or teleologically anthropocentric, but profoundly theo-eco-centric. All creatures are of value independently of our valuation of them, because all things find their meaning, purpose and redemption ‘in Christ’.

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?

In contrast to the Noachic covenant, which appears to prioritise the value of biological status ('kinds' of animal), the teaching of Jesus reinforces the importance of individual creatures. If the creator of the Universe notices and cares about the life and death of particular sparrows (Matthew 10:29-31), then contemporary Christian ethics should take account of the suffering of individual creatures. The New Testament's cosmic Christology suggests *all* creatures, rather than a representative few, are reconciled to God and will acknowledge his Lordship (Colossians 1:20; Philippians 2:10), implying their eternal value before God. This has clear implications both for animal welfare and conservation biology.

For instance, in protecting threatened species from extinction, conservationists must be careful not to treat other species as inconvenient 'problems' that require removal. There are many contemporary examples, often relating to introduced species replacing native ones through habitat destruction, predation or inter-breeding. The solution in such cases may legitimately involve the removal of alien introduced species to enable the integrity of a threatened species or ecosystem to flourish, but such removals need to be conducted in ways that are consonant with a God who has compassion on all that He has made, individual sparrows or rats, as well as evolutionarily distinct and globally threatened species.

Similarly, Matthew 10:29-31, particularly when placed alongside Job 38-41, suggests that God delights in creatures that humans habitually overlook or dislike. Unlike those contemporary biologists who value more highly those species which are genetically distinct, evolutionarily 'advanced', or play a keystone role within ecosystems, Jesus states that even abundant sparrows matter to God. This demonstrates a more collaborative and ecological understanding of wild nature than that of the evolutionary tree. Ecological systems are interdependent communities within which each creature plays its part, irrespective of sophistication or uniqueness. Bacteria may be biologically 'primitive' in evolutionary terms but they have continued to exist whilst other more complex organisms have become extinct. Later 'more developed' species depend on them in myriad ways. As Bauckham states, "All these creatures, whether alive or extinct, whether they appeared early or late in the evolution of life, whatever ontological level we might assign them, have their own value in themselves and in the sight of their Creator" [2015, 47].

3. Can and should we put an economic price on nature?

This, and the following question on ecological anthropology, are linked in relation to Christ's life, teaching and ministry. The values of God's Kingdom challenge overly anthropocentric

ways of assessing nature's value. Relationships, with God-in-Christ, with other people, particularly "the least of these" (Matthew 25:40), and with the whole of creation, are to be characterised by *shalom*, rather than by the idolatrous pursuit of profit. The Gospels are clear that "abundant life" (John 10:10) does not consist of an abundance of possessions acquired by exploiting the poor or abusing God's creation. Rather, the ethics of the Beatitudes and the example of Christ, who takes the form of a servant (Philippians 2:5-11; John 13:1-17), redefine anthropology. Humanity's role is to lead by self-sacrificial service of the other, an 'eccentric existence' [Kelsey 2009] that finds its locus in the flourishing of other people and of wild nature, to the glory of Christ. Putting an economic price on nature may be a useful tool, but it should never be conflated with measurements of nature's true value.

4. What is an appropriate ecological anthropology?

What it means to be human is redefined in Christ. His incarnation astonishingly shows both what it means to be perfectly human, yet also incorporates both human and animal flesh into the Divine. Jesus is the new Adam and the perfect *imago Dei*, uniquely reflecting God's image in his behaviour towards every aspect of creation. In his teaching, he explores stewardship as the careful guardianship and development of God's property to God's glory. In his behaviour he overturns hierarchies, welcoming women and children, and serving his disciples.

The implications of this behaviour towards nonhuman creation only become fully clear when Christ is seen in the light of the Johannine and Pauline visions of his theological significance. Jesus is Creator, Sustainer, and Saviour of every part of the created order. Humanity plays a particular role within this cosmic story: called to reflect God's image, responsible for the disastrous consequences of sin, participants in God's redemptive promises in covenant and supremely in Christ's life, death and resurrection. The story is anthropocentric only insofar as humanity occupies centre stage for much of it. However, the story is not only about humanity. It is God's story of a good creation, spoiled and then redeemed, and of all creatures playing a role in the Christocentric worship of eternity. What this means for ecological anthropology, is that humanity is to serve God's larger theo-eco-centric purpose, not a narrow anthropocentric goal. We are to be servant-stewards, seeking the restoration and reconciliation of all God's creatures.

This is not simply an individual task. The New Testament suggests it finds its expression in and through the local church, in concrete attitudes, decisions and actions on behalf of all creatures.

If Christ is creator, sustainer and redeemer of all creation, then the role of Christ's body, the church, must include creation care. N. T. Wright comments, "The resurrection of Jesus and the gift of the Spirit mean that we are called to bring real and effective signs of God's renewed creation to birth even in the midst of this present age." [2007, 120]. Developing an ecological Christology is a task both for the academy and for practical ecclesial response in worship and mission, to the end that Christ's headship in the Church is reflected in creation. Irreversible changes wrought by anthropogenic climate change and the rapid depletion of tropical forests, marine ecosystems and global biodiversity give added urgency to this task.

The particularity of the Christocentrism this chapter has espoused must necessarily be held in tension with the need for shared language and values in order that global ecological challenges may be addressed within a world of multiple worldviews. If all things hold together in Christ and disintegrate without him (as Colossians 1:17 implies), what does that mean for plural, secular or other-than-Christian cultures? Answering such questions necessitates engaging not only with a generous, cosmic Christology but also with pneumatology in discerning the work of the Holy Spirit beyond the church and in every part of creation.

The multiple ecological crises faced by wild nature are also faced equally by all humanity, Christian or not. In the light of nature's rapid depletion and the existential threats to the integrity of ecosystems, there is an added urgency to the task of seeking shared values concerning the value of wild nature. As the following chapter turns towards biblical accounts of God's plans in consummation and eschatology, we shall seek for signs of God's Spirit within all creation, breathing life, restoring, and inspiring a vision of hope.

CHAPTER 5

ECOLOGICAL ESCHATOLOGY

Theological reflection on the end of all things - eschatology - has always been a subject of controversy. 'End' contains inherent ambiguity, encompassing both demise and destiny (*telos*), with consequently divergent implications for the nature of future hope. Theologians have varied between dismissing biblical eschatology entirely, seeking a contemporary 'realised eschatology', and various forms of future fulfilment [Barrett 1953; Walvoord 1970]. Moreover, the genre of biblical apocalyptic, dominating eschatological material, is characteristically complex, and open to mutually-contradictory interpretations. Apocalyptic is not only difficult to define precisely, but also refers to a genre much of which is non-canonical, has an internal self-referential logic, moves rapidly between supernatural transcendent visions and temporal spatial reality, and is characterised by symbolism, vivid imagery and hyperbole [Collins 1998; Carey 2016]. Unsurprisingly, this has led to, on the one hand, "a prejudice against the apocalyptic literature which is deeply ingrained in biblical scholarship", and on the other, its popularity amongst millenarian groups [Collins 1998, 1].

Thus, whilst detailed examination of apocalyptic texts is necessary to this chapter, we need first to discern a hermeneutical centre of gravity to assist in navigating the complexities of biblical ecological eschatology. Such a reference point is not to be found primarily in individual proof texts but in the narrative arc of the biblical drama as a whole. Paul Santmire explores "the ambiguous ecological promise" of the Western theological tradition, tracing two distinct and contrasting motifs, the 'spiritual' and the 'ecological', within the biblical canon [Santmire 1985]. The spiritual motif stresses a 'vertical' union with the Divine whilst the ecological encompasses a complexity of relationships between God, humanity, land and creatures. Santmire summarises the eschatological question posed by these two motifs: "Is the final aim of God ... to bring into being at the very end a glorified kingdom of spirits alone ... Or is the final aim of God ... a transfigured cosmos where peace is universally established between all creatures at last?" [ibid, 217-218]. Discerning which motif, or narrative arc, is primary in biblical theology is a necessary precondition to examining eschatological texts in detail.

The idea that eternity is incorporeal has been pervasive in western culture, within and beyond Christianity. Rooted in a dualism that values 'spiritual' above 'material' (Santmire's 'spiritual motif'), it is implicit in the eschatology of populist dispensationalist authors such as Hal Lindsey [1970] and Tim LaHaye [LaHaye and Jenkins 1995] proposing that the earth is destined

for final conflagration and annihilation, but that Christian believers will escape to an otherworldly heaven.

The historical, cultural and psychological contexts for the emergence of this theology are beyond the scope of this thesis. However, it is necessary to examine its core theological assertion concerning the obliteration of the current material world prior to the creation of a new ‘spiritual’ heaven and earth. As we will see, it is quite possible to interpret much biblical eschatological language to support presuppositions of the destruction of material creation and the redemption only of human souls. The nature of apocalyptic and prophetic literature is inherently ambiguous and allusive. However, to do so is to make a number of critical theological mistakes.

Firstly, a denial of material continuity undermines the fundamental doctrines of creation, incarnation and resurrection. The overwhelming weight of canonical biblical evidence and the ecumenical creeds affirm God’s valuation of material creation as ‘all very good’, sustained daily, blessed through the incarnation, redeemed through Christ’s crucifixion, and made eternal in Christ’s bodily resurrection (1 Corinthians 15). It is thus inconceivable that God would elect to destroy or replace the entirety of material creation. As Theodore McCall states, “If we maintain that God loves the world ... it is difficult to believe that God would then abandon it or destroy it” [2011, 21].

Secondly, there is the hermeneutical error of seeking detailed literal fulfilment of apocalyptic literature. N. T. Wright states: “Apocalyptic language exploits the heaven/earth duality in order to draw attention to the heavenly significance of earthly events; apocalypticism exploits apocalyptic language to express a non-biblical dualism in which the heavenly world is good and the earthly bad” [1999a, 36]. This is an important distinction, elucidating that the hyperbolic language of destruction associated with much apocalyptic should not translate into a dismissal of the goodness or permanence of material creation. The combination of apocalyptic language of upheaval and turmoil allied to extra-biblical Neoplatonic matter-spirit dualism, has been a determinative factor in the development of theologies with negative environmental consequences [Ruether 1972, 115-116; Hiebert, 1996 153-155].

Thirdly, the notion of heaven as a place of purely spiritual existence, in contrast to embodied earthly life, owes more to classical philosophy than biblical thought. It was Plato, interpreted

by Plotinus and others, who proposed, “the radically new assumption of an immortal, immaterial soul and the aspiration to transcend this present world of matter, sensation, and change in order to attain to a higher, divine reality” [Middleton 2014, 31]. This contrasts with the integrative Hebraic worldview wherein material and spiritual are interwoven within a single complex reality. The English terms ‘heaven’ and ‘heavens’ translate various Hebrew and Greek terms. These include the Hebrew *shamayim* and *raqia* incorporating the physical skies / firmament which are part of a single created ‘earth and heavens’ (Genesis 1:8, Psalm 148:4-6). In the New Testament, the Greek *ouranōs* includes heaven as the sphere of God’s presence and reign, as with ‘Kingdom of Heaven’ (*basileia tōn ouranōn*) in Matthew’s Gospel. This latter meaning is crucial to biblical understandings of the present era as one of dislocation between heaven and earth. The separation of God’s presence from material creation was neither God’s original plan (cf. Genesis 1-2) nor God’s ultimate purpose (Acts 3:21; 1 Thessalonians 1:10; Revelation 21:3), but is understood as a consequence of the cosmic gulf sin introduced to the created order (Genesis 3). N. T. Wright’s words, addressed to dispensationalist views, are particularly apposite: “Christians regularly speak of their hope in terms of ‘going to heaven when they die’. ... I suggest instead that what we find in the New Testament, and what I commend, is the Christian hope for a new, or renewed, heaven and a new, or renewed, earth, with these two integrated together” [1999b, 5].

Fourthly, the New Testament language for ‘new’ creation entails existential renewal rather than ontological novelty. The Greek *kainos*, consistently used for ‘new’ in preference to *neos* in New Testament passages relating to eschatology, has connotations of cleansing, renewal, and restoration rather than complete abolition and replacement. John Sweet writes “New (*kainos*) connotes ‘new in kind’ not just ‘another’, but as with the ‘new covenant’ we are not dealing here with the brand new but with radical renewal” [1979, 297]. Similarly, regarding the ‘new heaven and new earth’ of Revelation 21:3, this is not discontinuous, but “eschatologically new, that is, the qualitatively quite different life of the eternal age to come” [Bauckham 1993, 49]. When Christ, seated on the heavenly throne, says “I am making everything new!” (Revelation 21:5), it is fundamental renewal rather than complete replacement that is envisaged. The passage notably does not say “I am making new things”, but refers rather to that which currently exists (everything) being renewed (made new) as the creator re-creates.

Finally, the Hebrew Scriptures and the New Testament contain eschatological prophecies involving both continuity and discontinuity, as will be explored further in this chapter. Whilst theologies of total destruction and replacement recognise the imagery of discontinuity, they fail

to make sense of biblical passages suggesting a degree of continuity, such as Romans 8 where creation longs for freedom from bondage and the earth groans in pregnant anticipation of the ‘new’ creation. As the previous theological chapters of this thesis have demonstrated, the parameters of a biblically Christian eschatology are set by the doctrines of creation (God’s ultimate purpose in bringing into being), covenant (God’s continuing desire for responsive relationship with all creation) and, through Christ, of incarnation (affirming material reality), redemption (the extent of God’s saving plans in Christ), and resurrection (God’s action, when all seems lost, in creating a renewed and transformed material creation).

Within these parameters, it is the ‘cosmic theology’ of the New Testament, primarily in Pauline texts, which clarifies that all creation will one day be liberated from futility (Romans 8) and be subject to the Lordship of Christ (Philippians 2:10-11), who is the fulfilment of creation (Ephesians 1:23). The place of ‘wild nature’ and nonhuman creatures within God’s eschatological purposes is a necessary and systematic outworking of the cosmic vision within which humanity’s salvation is located. God’s plans in creation, redemption, judgment and consummation are not restricted to disembodied souls or one species alone.

This chapter will take key canonical eschatological passages, examining them in view of the trajectory of God’s purposes described above. We will see first how Old Testament prophetic visions of hope beyond judgment invariably include nonhuman creatures. Turning to the New Testament, 2 Peter 3, the source of many ecologically negative theologies, will be re-examined and shown to articulate hope beyond judgment. Next, apocalyptic passages in the synoptic Gospels and the book of Revelation will be analysed to see how, interpreted in the light of scripture as a whole, they too foresee a positive future beyond devastation for the whole material creation. This overview of eschatologically focussed passages will conclude by examining relevant Pauline and Johannine texts, providing a context that is both cosmic and profoundly ecclesial.

The four questions at the heart of this thesis, relating to why we value wild nature, the locus of value in nonhuman creatures, the viability of economic valuations of nature, and the place of humanity within nature, will be in the background of discussions about ecological eschatology in this chapter, and summarised briefly in its conclusions. In addition, four further questions provoked by eschatological considerations will be considered:

- i. To what extent are biblical notions of eternity in continuity with or abruptly divergent from creaturely life now, particularly with regard to material existence?
- ii. If nonhuman creatures are included in understandings of eternal life, does this mean every individual, examples of each species, or some other form of continued existence?
- iii. Can scientific predictions and theological visions of earth's ultimate destiny be reconciled, with particular reference to biblical visions of peace between all creatures?
- iv. What connection, if any, is there between current human action to preserve wild nature, and God's eternal purposes for nonhuman creation?

The Peaceable Kingdom

The eschatological visions of the Hebrew Bible are full of depictions of nonhuman creatures living in harmony with human beings in God's peaceable Kingdom. Thus, Isaiah 11:6-9 speaks of wolves, leopards, lions, bears and snakes living alongside lambs, goats, calves, cows and infant children. Isaiah 65:17-25 similarly describes wolf, lion and serpent no longer predating domesticated animals or humans within the "new heavens and new earth". Hosea 2:16-23 also envisions an era of ecological peace wherein Yahweh will make a covenant "with the beasts of the field, the birds in the sky and the creatures that move along the ground" (2:18a).

There is a perspectively anthropocentric context to such Old Testament visions of ecological harmony, in that they focus on the removal of threat to humanity from dangerous wild animals. Job 5:22 puts it clearly: "You will laugh at destruction and famine, and need not fear the wild animals." For people in a marginal agrarian context surrounded by wilderness, the threat to life and livelihood posed by wild creatures was constant and imminent. The Syrian brown bear (*Ursus syriacus*) was relatively common [Borowski 1998] and dangerous (2 King 2:23-24), particularly mother bears separated from their cubs (2 Samuel 17:8; Hosea 13:8, Proverbs 17:12). Similarly, wolves (*Canis lupus*) were feared as ravenous and fierce (Genesis 49:27). The notion of bears and wolves around small children would have seemed impossible, yet both are envisaged as non-threatening in Isaiah's visions of peaceful coexistence (11:6-7; 65:25).

What is significant is that, in each of these passages, the danger wild animals pose is not addressed by their destruction or removal but in the transformation of threat into peaceful companionship. Underlying the superficial anthropocentrism is a profound theo-eco-centrism wherein all of God's creatures, including dangerous wild beasts, have a legitimate place within a covenantal understanding of creation.

Whilst the authors of the Hebrew and Christian scriptures probably did not dwell on the possibility of eternal animal life, they inhabited a comprehensive worldview that placed all life, animal and human, within the compass of God's comprehensive purposes from creation to new creation. Brueggemann observes how, in Isaiah 65:17-25, Yahweh recreates original creation "only now more grandly and more wondrously" [1997, 549], including a reversal of the Genesis curse with the removal of "even the most deeply embedded distortions in Yahweh's world" [ibid], extending God's rule from Israel to the whole earth.

Similarly, Middleton notes how Old Testament visions of the future consistently refer to transformed earthly reality; an idealised Promised Land, rather than a disembodied heavenly afterlife: "The Old Testament does not spiritualize salvation, but rather understands it as God's deliverance of people and land from all that destroys life and the consequent restoration of people and land to flourishing" [2014, 25]. He argues that this worldview, epitomised in Isaiah 65-66, informs New Testament eschatology including Christ's use of *paliggenesia* (the renewal of all things) in Matthew 19:28, and Peter's use of *apokatastasis* (the restoration of all things) in Acts 3:21. Peter specifically links his eschatologically comprehensive insight to what God had "promised long ago through his holy prophets". Origen understood *apokatastasis* as guaranteeing the inclusion of animal souls in eternity, although he could not envisage continuity between the current and the new creation [Clough 2012, 150-151].

As the biblical evidence is weighed, it becomes increasingly evident that, whilst animals bear the consequences of God's judgment upon sin and evil (as with the Noachic flood), they are not the direct objects of it. Descriptions of natural devastation are often a prelude to nature's restoration. So, in Isaiah 34:1-17, God brings judgment on the whole of humanity, with the earth as both witness (34:2) and subject (34:4), as stars are dissolved and heavens roll up, but ultimately wildlife reoccupies places of former human habitation (11-17). Identifying particular species from ancient Hebrew names is often impossible, yet these are real rather than mythological creatures and, based on their behaviour, are often scavengers and desert-dwellers such as owls and jackals. Hilary Marlow notes that Isaiah deliberately blurs the boundaries between human and 'wild' space, describing a rewilding following environmental disaster (soil-degradation, desertification and urban depopulation). In the midst of judgment upon humanity, God provides habitat for wildlife in former human habitation: "The context (vv.16b-17a) suggests this is YHWH's deliberate provision for these animals. It is only for the human population, not the animal one, that the outcome is disastrous" [Marlow 2009, 229].

2 Peter 3

2 Peter 3 is central to most theologies involving earth's final destruction, so needs detailed analysis. Jonathan Moo writes, "It is generally assumed that 2 Peter 3 unequivocally portrays the complete dissolution of the present cosmos and its replacement with a new heaven and a new earth" [2014, 154]. The Authorised Version (KJV) is particularly responsible for this view, speaking of the heavens and earth "being reserved unto fire against the day of judgment" (3:7). It continues, "the heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up" (3:10), before replacement by a "new heavens and a new earth, wherein dwelleth righteousness" (3:13).

It is critically important to note the Old Testament context which 2 Peter 3 provides. Verse 6 compares God's use of water to "destroy" the earth (NIV; KJV has "perished") at the time of Noah with a predicted future destruction by fire. Yet, in the Noachic account, the earth, whilst devastated, was not obliterated by the flood. Judgment and destruction were selective, focusing upon sin and evil, and presaging renewal and divine blessing for the earth and its surviving creatures. We must therefore approach the passage with the assumption, as with the Noachic covenant, of God's redemptive blessing for all creation following catastrophic judgment.

Turning to specifics, in 2 Peter 3:7 *apoleto* means to destroy thoroughly but, importantly, "the idea is not extinction but ruin, loss, not of being, but of well-being" [Vine 1981, 302]. The mention of fire would likely have drawn Peter's readers to Malachi 3:2-3, where the 'day of the Lord' is described as a refiner's fire, purifying but not annihilating. It is also clear that the focus of destruction is not the entire heaven and earth, but "the ungodly". Thus, 2 Peter 3:7 predicts not cosmic annihilation but rather devastating yet selective cleansing judgment, as with the Noachic deluge.

Next, in 2 Peter 3:10 and 12, inadequate English translations have fuelled ecologically negative readings. Verse 10 says the heavens will 'pass away' (NRSV, KJV) or 'disappear' (NEB, NIV), echoing Isaiah 34:4 and 51:6 where the context is decisive judgment, not total destruction. Moreover, it is the heavens rather than the earth that are to pass away: somewhat alarming for those assuming an otherworldly heaven to which Christians will escape following earth's destruction. 2 Peter 3:10 and 12 also speak of the 'elements' being 'destroyed by fire' or 'melted' (NIV; NEB 'disintegrate'; GNB 'burn up and be destroyed'). The term is *stoicheia*,

and its meaning is disputed. Some argue for a Stoic background and thus the destruction of the core elements of water, fire, earth and air. A more convincing interpretation draws on the Jewish background of the passage (Isaiah 34:4, Malachi 4:1, 2 Clement) in suggesting *stoicheia* refers to the ruling powers of the universe [Bauckham 1983]. This is consistent with *stoicheia*'s use in Galatians 4:3, 9 and Colossians 2:8, 20, where it signifies the elemental spirits or basic principles of this world, from which Christians are set free.

The final key word, *heurethēsetai*, appears in 2 Peter 3:10 in most reliable ancient Greek texts, including Codex Sinaiticus and Vaticanus. Whilst there are alternatives, it appears these are later insertions, possibly by Gnostic interpreters seeking to clarify the passage. *Heurethēsetai* has connotations of rediscovery and disclosure, such as the image of a farmer burning stubble from a field before new planting, and thus is well translated as 'laid bare' (NIV, NEB) or 'disclosed' (NRSV). Moo comments on the fire of God's judgment: "Its function in the context is primarily to lay the earth bare before God, to reveal it as it is and to leave human beings and their works without any place to hide" [2014, 159]. Once judgment has taken place, and the fallen powers have been destroyed, earth will be revealed again. In conclusion, the most accurate translation of 2 Peter 3:10 may be as follows: "The day of the Lord will come like a thief, the heavens will pass away with a loud noise, and the elemental powers will be removed through fire, but the earth and the works upon it will be revealed."

As R. J. Berry states, "The context [of 2 Peter 3] emphasizes the scrutiny of human deeds rather than annihilation, consistent with other passages about the refining effects of fire" [2000, 181]. Examining 2 Peter 3 in some depth has confirmed that the consistent biblical message is of devastating yet selective judgment upon sin and evil within the wider context of God's saving plans for all creation. Wim Rietkerk summarises it well: "The whole of the Old Testament emphasizes that God's work, his redeeming power, is meant to renew this world, to cleanse it from sin, to take away all brokenness, to remove death, and to glorify it into a renewed world. This world will not just perish; it will be transformed" [1989, 22-23].

Jesus' Eschatology: Matthew 24, Mark 13, Luke 21

In Matthew 24, paralleled with minor differences in Mark 13 and Luke 21, Christ's words regarding future judgment are recorded. In this 'Olivet Discourse' there is the hermeneutical challenge, characteristic of biblical apocalyptic, of discerning the extent to which Christ refers to imminent destruction (of the Jerusalem Temple), or to 'end of time' events. Commentators

since Albert Schweitzer have positioned Jesus as in continuity with Jewish apocalyptic prophecy, but there has been much disagreement as to whether his words are predominantly fulfilled in the first century CE, cyclically throughout history, or in the eschatological future.

The Olivet discourse as a whole contains dramatic and violent apocalyptic imagery which might superficially suggest either radical renewal or complete replacement of material creation. Specifically, in Matthew 24:35 (Mark 13:31; Luke 21:33), Jesus states that “heaven and earth will pass away”. Dispensationalists and pre-millennialists have seen this verse, surrounded by vivid imagery of tumultuous chaos, as confirmation of the ultimate destruction of the cosmos, and thus of the futility of environmental care.

Yet, in Matthew 24 and its parallels, whenever the words “Heaven and earth will pass away” appear, they are immediately prefaced by Jesus’ assertion that, “this generation will certainly not pass away until all these things have happened” (Matthew 24:34, Mark 13:30, Luke 21:32). The two statements are linked in a single pericope and relate to each other. In Luke’s version, the preceding catalogue of predicted wars, famines and earthquakes explicitly refers to imminent persecution and the destruction of Jerusalem (21:12-24). It thus appears that the immediate historical horizon of these passages was the Roman destruction of Jerusalem in 70 CE. This interpretation is followed by virtually all pre-modern commentators. The primary context is contemporaneous rather than eschatological, and thus the ‘passing away’ of heaven and earth needs to be interpreted in some other way.

Further light is shed through examining Psalm 102:25-27, which Matthew 24:35 alludes to:

“²⁵ In the beginning you laid the foundations of the earth,
and the heavens are the work of your hands.

²⁶ They will perish, but you remain; they will all wear out like a garment.
Like clothing you will change them and they will be discarded.

²⁷ But you remain the same, and your years will never end.”

Here, God’s power and everlasting nature are contrasted with the earth and heavens, which appear comparatively contingent and impermanent. Like Jesus, the Psalmist is choosing those things his audience would regard as the most stable and secure imaginable (the earth below and heavens above), and asserting that God’s nature (in the Gospels, Christ’s words) is even more

reliable. Rather than a prediction of the destruction of the material universe, this is a rhetorical device to convey the trustworthy nature of God's character, and in the Gospel accounts, of Christ's teaching. An analogy could be made to an Alpine lover stating, "I will love you until the Matterhorn collapses to the ground". The emphasis is on the longevity of love rather than as a geological prophecy. As Richard Middleton argues, "Psalm 102 is not predicting the ending of the world; rather, it is better taken as affirming that even if the world did come to an end, God would still be faithful" [2014, 119].

Significantly, in Psalm 102 the imagery is not of total obliteration but is organic in nature, speaking of the natural processes of death ('perish') and ageing ('wear out'). If there remains a predictive element, then the earth and heavens are to be transformed (replaced like garments) in an act of radical regenesiis rather than total obliteration. Calvin's commentary states, "For although they will not be completely destroyed, the change of their nature will consume that which is mortal and perishable, in order that they may be renewed according to Romans 8" [Quoted in Rietkerk 1989, 33].

This interpretation coheres with other Psalms which emphasise the integrity of creation: "The world is established, firm and secure" (Psalm 93:1); "The Lord reigns. The world is firmly established, it cannot be moved" (Psalm 96:10); "Your word, Lord, is eternal; it stands firm in the heavens. Your faithfulness continues through all generations; you established the earth, and it endures" (Psalm 119:89-90). Thus, Paul Williamson is surely correct in stating that, in the Psalms, cosmic "permanence and stability are emphasized, rather than instability or transience" [2014, 135].

In conclusion, it is only possible to use Matthew 24:35 and its parallels to bolster presuppositions of cosmic annihilation by ignoring their biblical context. Jesus' apocalyptic teaching contains both judgment and hope, discontinuity and continuity. For instance, there are allusions in Matthew 24:29 to Isaiah 13:10 and 34:4, where God's judgment against sinful nations includes stars dissolving and falling, and the heavens rolling up like a scroll. Yet, in Isaiah these are not foreseen as end-of-time events since they are immediately followed by desert creatures finding new homes in abandoned cities (Isaiah 13:19-22; 34:11-15).

Biblical eschatology always exists between the poles of total cosmic annihilation and naïve ecological optimism. The world will neither be destroyed nor evolve smoothly towards a new age of harmony. There will be the dislocation and violent upheaval inherent in cleansing

judgment prior to the unveiling of a new reality: in Jesus' terms, the 'fullness' of the Kingdom of God, in which humanity and the whole material creation will be set free (Romans 8:21).

The Book of Revelation

D. A. Carson writes, "Of the writing of books on Revelation there is no end: most generations produce far too many" [2007, 145]. Revelation has always been a subject of both popular and scholarly fascination. In brief overview, there are four broad schools of interpretation: 'idealist' approaches interpret apocalyptic allegorically, seeing Revelation as "a theological poem presenting the ageless struggle between the kingdom of light and the kingdom of darkness." [Mounce 1977, 43]; 'preterist' understandings see the message of Revelation and other apocalyptic passages as largely or totally fulfilled in the 1st century CE; 'historicist' interpretations, widespread amongst Reformation and Protestant thinkers, envisage Revelation as progressively fulfilled with particular passages tied to specific historical events (leading to multiple 'interpretations' reflecting geographical and historical contexts [Walvoord 1996, 19]); 'futurist' approaches locate Revelation's fulfilment largely in the 'end times', often as part of literalist dispensationalist and millennialist beliefs (following J. N. Darby and the Scofield Reference Bible, but generally critiqued by scholars for ignoring the nature of apocalyptic [Hanegraaff 2007, 14]).

When examined from the perspective of nonhuman creation, the book of Revelation contains a wealth of vivid natural imagery. The physical cosmos of earth, oceans, heavens and creatures make numerous appearances. Unless one takes an entirely allegorical approach, it is clear that God's purposes in the drama of judgment and new creation are tangible and material rather than entirely ethereal. What is harder to discern is which if any passages are to be interpreted literally and whether the final eschatological outcome is ecologically positive or negative.

Despite these qualifications, it is valuable to look at creation imagery within Revelation in more detail, attempting to discern the author's intent and its implications for this thesis. The book begins with a sense of urgency and a Christocentric orientation. Jesus is the "ruler of the kings of the earth" (1:5) and the "Alpha and Omega" in whom past, present and future are to be found (1:8). Next, the letters to seven churches (1:9-3:22) provide an ecclesiological context before the lens pulls back to reveal a heavenly perspective on earthly events. The language is apocalyptic in the original sense of unveiling what is hidden, full of allusion to the Old

Testament visions of Daniel and Ezekiel, and uses imagery drawn from the Hebrew Bible and elsewhere in portraying a reality hard to comprehend from an earthly perspective.

At the centre, God is enthroned in splendour, and amongst those surrounding him are four living, worshipping creatures (4:6-9), in turn representing wild animals ('like a lion'), domesticated creatures ('like an ox'), humanity ('a face like a man') and birds ('like a flying eagle'). These are not identifiable species (they were *homoion* – 'like' biological creatures) but rather types or tropes of the major classes of created beings. They symbolise the whole of sentient creation worshipping God, who is worthy to receive glory and honour, "for you created all things, and by your will they were created and have their being" (4:11). Wilcock states, "We take it that the elders and the living creatures represent God's people and God's world ... So nature joins the church in praising God, and for both he is not only Creator (4:11) but also Redeemer (5:9-10)" [1975, 68]. Other commentators, including Sweet [1979, 120] and Bauckham [2011, 177] concur that the four living creatures represent all categories of creatures worshipping God in the heavenly throne-room.

Chapter 5 introduces Christ as the slain Lamb, before whom the four living creatures and the twenty-four elders fall in worship due to his redemptive work. The immediate scope of this redemption appears anthropocentric (5:9-10), yet the worshipping throng is joined by "every creature in heaven and on earth and under the earth and on the sea, and all that is in them" (5:13). The implication for this thesis, is that God's cosmic purposes include not only human beings but the worship of all creatures, both in heaven (the symbolic living creatures) and biological entities on earth and in the oceans.

Thus, if the ultimate purpose of all creatures is to worship God, humanity's role must include enabling nonhuman creatures to flourish and worship their Creator. Without the worship of nonhuman creatures, God's purposes will be thwarted. Bauckham points out that humanity's role in Revelation 4-5 is less as Priests of creation, vocalising nature's worship, and more as part of the chorus of creatures: "Our human responsibility in this respect is not, as some argue, to voice creation's praise for it or to mediate its praise to God, but to let it be itself. Humans and other creatures are made to be partners in praise, like the four living creatures" [2011, 184]. At most, humanity's role is (to use the gardening imagery of Genesis 2:15) to tend and keep the integrity of creation so that nature can worship of its own accord, simply by being what it was created to be.

Chapters 6-19 contain an elaborate and complex series of judgments visited upon the earth and its inhabitants. A successive series of seven trumpets, seven seals, and bowls containing seven plagues reveal a cosmic battle of good and evil played out in the theatre of material creation, leading to the overthrow of human empires and the spiritual forces underlying them. Nonhuman creatures are at times both agents (6:7-8) and victims (8:9) of God's judgment. As elsewhere in the Hebrew Bible and New Testament, there are both negative and positive repercussions for wild nature, so it is important to examine key references.

Firstly, nonhuman creatures appear in descriptions of extraordinary chimera-type creatures. For instance, in 9:3-4 a plague of monstrous locusts is unleashed, looking like warhorses with women's hair, lions' teeth and scorpion stings. Similarly, in 13:1-2, the beast from the sea resembles a leopard, with feet like a bear and a mouth like a lion. These are not hybrids of earthly species but rather use symbolic nature language to describe manifestations of spiritual forces involved in the hidden battle between good and evil. They should not therefore be seen as having direct relevance to the subject of this thesis.

Secondly, there are passages describing devastation visited on earth, oceans and living creatures. In 6:12-14 a massive earthquake occurs when the sixth seal is opened: the sun turns black and the moon red, stars fall to earth, the heavens recede like a scroll, and mountains and islands are shaken from their place. Some see this as predicting final destruction for the created cosmos. Wilcock writes, "That day will spell the end of the entire universe as we know it (Heb. 12:26), the end of the planets and galaxies, as well as the end of the human institutions they may symbolize" [1975, 76]. However, such an interpretation is not borne out by detailed examination. Wilcock also refers to Hebrews 12:26 which speaks of God promising to shake (*seisō*) the earth and heaven. The same word is used in Revelation 6:13, and in Matthew for both the earthquake at Christ's crucifixion (27:51) and the reaction of the guards to his resurrection (28:4). It is a term implying profound upheaval rather than final destruction. Other images in Revelation 6:12-14 also allude to Old Testament texts concerning judgment that is devastating but not terminal, including Joel 2:31 (sky turning black and moon red) and Isaiah 34:4 (stars falling and the heavens rolling up like a scroll). Similarly, the destruction following an angelic trumpet (8:5-12) is selective rather than absolute (a third of living creatures in the sea die), and whilst in 16:3 every living thing in the sea dies, there is no reference to a similar devastation upon land animals. There is much debate as to how literally to interpret the details of apocalyptic language that tends towards hyperbole, with references to the sea often being particularly symbolic given its Hebrew associations with the forces of chaos.

Thirdly, alongside passages describing natural devastation are others suggesting the earth and its creatures suffer only because of the spiritual battle unleashed by humanity's sin. Thus, in chapter 16, whilst plagues cause chaos for the oceans and their creatures, it appears this is 'collateral damage' in a judgment directed towards sinful humanity. The earth and its creatures are victims within the cosmic spiritual battle rather than themselves being evil. Like the landless poor, the *anawim* of the Hebrew Scriptures, they are the sinned against rather than the sinners. Thus, in 12:12 a voice from heaven declares, "Woe to the earth and the sea ... [because] the devil has gone down to you", and in 19:2, the great prostitute "corrupted the earth by her adulteries." In both cases the earth appears to be an innocent victim. Importantly, Barbara Rossing identifies the "woe" of 12:12 not as a curse but rather "a lament for Earth" [2002, 181], demonstrating that 'woe' (*ouai*) is used in Revelation in opposition to 'rejoice' (rather than to 'blessed' as in the Lukan Beatitudes). She points out that the earth actively resists the evil foisted upon it by swallowing the river unleashed by the demonic dragon (12:16) [ibid, 184]. Whether or not one accepts Rossing's wider account, predicated on Revelation as a political tract against imperial Rome, her interpretation is surely correct in this instance.

Finally, whilst Revelation's primary interest is anthropocentric, concerning the place of the Church within God's ultimate purposes, there is repeated evidence that material creation relates to God in worship, is of value to God independently, and will ultimately participate in God's restorative purposes beyond judgment. Thus, in 7:11-12, alongside countless human and angelic worshippers standing before God's throne in eternity, we find the symbolic four living creatures, representing God's biodiverse creation. Similarly, in 9:4, the locust plague is instructed not to harm grass, plants or trees but only those people not marked with God's seal. In the next chapter, one of the angelic messengers swears by God as creator of "the heavens and all that is in them, the earth and all that is in it, and the sea and all that is in it" (10:6). These descriptions do not instrumentalise material creation but rather see God's power and majesty demonstrably present within nature.

Most significantly, in 11:15-19, once the seventh trumpet is sounded, voices from heaven declare, "The kingdom of the world has become the kingdom of our Lord and of his Messiah, and he will reign for ever and ever", and that "the time has come ... for destroying those who destroy the earth" (11:15, 18). This passage implies the final fulfilment of the prayer Christ teaches his disciples, for God's kingdom to come "on earth as in heaven" (Matthew 6:10). It is a potent theological affirmation on the one hand of God's redemptive purposes towards the

created order and, on the other, of God's judgment upon those who exploit and destroy the integrity of creation. It stands in clear contrast to any and all theologies denigrating material creation and the creatures that inhabit it, or envisaging total obliteration of creation.

It is in the context of these distinctively hopeful passages that the 'new Creation' of Revelation 21-22 should be understood. Many commentators have noted the deliberate parallels between Genesis 1-2 and Revelation 21-22. Sweet notes that the river of Genesis 2:10 becomes a life-giving river in the heart of the city, the tree of life is restored, and the curse of Genesis 3:15 is removed [1979, 311]. Wilcock (notwithstanding his negative comments noted earlier) states, "The first chapter of the Bible describes how God made the world; the last one shows how he will remake it. The creation as it was, and as it will be, is an immense organism alive with the life of God" [1975, 212]. Yet, Revelation's climax is not a return to Eden but a distinctively innovative creation, with the New Jerusalem descending – a reintegration both of heaven and earth and of divine and human creation.

Whilst some may find the biblical arc from a garden to a city environmentally problematic, this says more about contemporary urban design than ecological theology. Biblically, cities may either symbolise humanity's attempt to live without God (Babel / Babylon) or the presence of God at the heart of human and natural thriving (Jerusalem; NB Augustine's 'City of God'). Jeremiah 29:4-7 suggests that even Babylon can be transformed socially, ecologically and spiritually by the presence of God's covenant people. In Revelation 21-22, the New Jerusalem combines both God's good creation and the best of humanity's God-given creativity [Alexander 2018]. It is not a polluted concrete jungle but a place of flowing water, fruitful trees and abundant life: nature and culture in perfect combination. The biblical vision of Revelation differs from contemporary dreams of paradise in being neither technocentrically anthropocentric, nor in presenting 'wild nature' free of human presence, but in believing that God's purposes encompass the flourishing of human and other creatures together.

Oliver O'Donovan is helpful here on creation's *telos*: "The redemption of the world, and of mankind, does not serve to put us back into the Garden of Eden where we began. It leads us on to that future destiny to which, even in the Garden of Eden, we were already directed" [1986, 55]. At the heart of Revelation's climax is fruitfulness and thriving, seen in the tree that produces fruit each month, and in the removal of sin, death and (in apocalyptic symbolism of chaos) the sea (21:1). As Maier argues, "Revelation 22.1-5 offers a vision of Earth creatures

living in life-affirming ecological interdependence ... it urges a renewed relationship of humankind with creation" [2002, 170].

In the light of Revelation's vision and the biblical eschatological overview we have undertaken, we can now revisit the first of the questions posed at the start of this chapter:

i. To what extent are biblical notions of eternity in continuity with or abruptly divergent from creaturely life now, particularly with regard to material existence?

The question of continuity and discontinuity is critical for understanding the relationship between existing and new creation. The consistent use of *kainos* rather than *neos* in eschatological New Testament texts has already been noted. The new creation of Revelation 21-22 is a radical regeneration of that which already exists (21:5), rather than a replacement. The critical theological link is to Christ's resurrection body, in that new creation is not simply a future hope but, at least in foretaste, a present reality comprised of the elements of material creation. Sweet expresses this well: "The consummation, though it lies beyond what eye can see or heart conceive, is yet compounded of the materials and choices of everyday life now" [1979, 297]. Gnanakan makes a similar point in arguing that, "Jesus' bodily resurrection is an obvious connection with the reality of the resurrection for humanity and for creation" [1999, 117]. Wolfhart Pannenberg's concept of *prolepsis* is helpful here [Pannenberg 1994]. If, in the risen Christ, new creation has already been inaugurated, then it is possible for redeemed humanity to participate with God's Spirit in acts of proleptic restoration which anticipate and point to the eventual complete renewal of the created order.

Overall, it is clear that the consistent voice of the biblical canon emphasises material continuity, amidst the radical cleansing of judgment. This continuity is based on the conviction that the earth and its creatures are God's both by creation and loving intent. Re-creation is entirely coherent with God's plans and purposes in Jewish and Christian thought: "If God was the transcendent source of all things, he could also be the source of quite new possibilities for his creation in the future" [Bauckham 1993, 48]. The precise nature of those new possibilities may remain elusive or perhaps allusive, but it is relation to the specific place of animals within new creation that we turn next.

ii. If nonhuman creatures are included in understandings of eternal life, does this mean every individual, examples of each species, or some other form of continued existence?

The prospect of eternity alongside nonhuman animals sometimes provokes extreme views. At one end are those convinced heaven will be unbearable without their favourite pet, whilst, perhaps in reaction against perceived sentimentality, at the other are some who dismiss the notion as unworthy of serious consideration. René Descartes apparently regarded the place of animals in eschatology as the second most important question in Christian apologetics after the allegation of atheism. He reasoned that animals were no more than automata, since, should they have sentient souls, the nature and scale of their suffering would have rendered God's goodness implausible: "If now even a single oyster or sponge also has an immortal psyche, the coin of individual worth is instantly devalued by a massive flooding of the market" [quoted in Clough 2012, 137].

Yet, to approach the question of animal redemption simply as a side-issue of theodicy, or as a factor of anthropomorphic fantasies regarding domesticated companions, is to misunderstand the issue profoundly. The pan-biblical drama of God's purposes from creation to new creation, within which nonhuman animals play an integral part, is found in many non-western Christian traditions. Ryan McLaughlin states: "Eastern Orthodox theologians tend to maintain consistently that the entire cosmos will in some manner participate in eschatological redemption through transfiguration" [2014, 47]. Metropolitan Paulos Mar Gregorios of the Orthodox Syrian Church of India has written: "For a long time now we have been conditioned to understand the redemption in Christ primarily - and too often exclusively - in terms of personal salvation. A basic requirement for a healthy Christian approach to the human environment seems to be a shift of gears in this regard" [1990, 39]. He proposes, instead, three key principles:

- "Human redemption can be understood only as an integral part of the redemption of the whole creation" [ibid, 39].
- "Christ himself should be seen in his three principal relationships: (1) to members incorporated into his body; (2) to the human race; and (3) to the other-than-human orders of created existence" [ibid, 41].
- "Christ and the Holy Spirit are related to the whole created order in three ways: by creating it, by redeeming it, and by finally fulfilling it in the last great consummation" [ibid, 43].

Gregorios' principles echo the biblical authors' antipathy to reductionism. They summarise God's purpose in redeeming humanity as part of God's cosmic salvific plans encompassing all kinds of creatures. Such an integrative view has never been entirely absent within the Western

theological tradition. John Wesley's sermon on 'The General Deliverance' uses Romans 8 and Revelation 21 to argue specifically for the redemption of animals as well as humans [1872, 60]. Yet, despite Wesley and others, the western tradition has often been dominated by a commuted, anthropocentric, spiritualised understanding of salvation. As one instance, C. S. Lewis' proposal that animal immortality is conditional upon their relationship with humans directly usurps Christ's centrality in redemption. Rather, as Clough states, "God must be understood to be the redeemer of all creatures, human and other-than-human" [2011, 148].

Contemporary theology has increasingly embraced the biblical understanding of God's cosmic purposes. Gnanakan states: "The promise of God cannot be restricted to people. The one who was shown to be the Creator of all things now becomes the one in and through whom all creation will also be restored" [1999, 115]. Similarly, Ian McFarland refers both to creation's groaning for redemption in Romans 8 and God's concern to "preserve both people and animals" in Psalm 34:6, as evidence that God's redeeming purposes encompass the whole created order and not only humanity [2014, x]. N. T. Wright identifies the resurrection as the key to this eschatological hope for all creation: "The central Christian affirmation is that what the creator God has done in Jesus Christ, and supremely in his resurrection, is what he intends to do for the whole world – meaning, by 'world', the entire cosmos with all its history" [2007, 103].

If nonhuman creatures are included in biblical understandings of redemption and eternal life, the question remains whether this includes every individual of each species that has ever lived (with consequent practical implications), or whether selected types or representatives will continue, or even if some novel form of continued bodily existence will be necessitated. These questions are only pertinent to this thesis to the degree that they potentially affect how humanity values and treats wild creatures, so they will be considered in that light.

Denis Edwards [2006, 106-123] discerns five possibilities regarding animal immortality in contemporary theological thinking, namely: universal resurrection (Moltmann), which he rejects as contradicting ecological science; objective immortality in God's memory (Albert North Whitehead), which he deems insufficiently Christological; subjective immortality (Jay McDaniel: the present moment as existentially experienced lives on continuously in God's memory), rejected for the same reason; space-time depth memory (Ernst Conradie); and Spirit-inspired resurrection varying according to types of creatures (Edwards' own position).

Whitehead's and McDaniel's theories, arising from process theology, fail to take account of the profoundly material nature of biblical eschatology and its rootedness in the unique work of Christ in creation, redemption and consummation. Their philosophical approach makes them largely irrelevant to practical ethical concerns about wild nature, so they will not be considered further here. Edwards' own ideas are also problematic in terms of defining criteria for categorising creatures and then ascribing eternal consequences on that basis. Clough argues against Edwards on the basis that to "invent distinctions in advance" is to underestimate the potential of an "omnipotent and bounteous God" in overcoming differences between current and ultimate reality [2012, 170].

It is Moltmann's and Conradie's concepts that resonate most closely with what is being proposed here. Moltmann's ideas have evolved over time in his massive corpus, but key to them is that, as McLaughlin puts it, "For Moltmann the nonhuman creation, including each individual creature, exists for God for its own sake" [2014, 216]. Moltmann himself expresses this most strongly in *The Coming of God*, where he writes: "If we were to surrender hope for as much as one single creature, for us God would not be God" [1996, 132]. In Moltmann's theological understanding, it is clear that God's own integrity is challenged should any individual creature fail to be preserved into eternity.

Thirty years earlier, in *Theology of Hope*, Moltmann identified the essential corporeality of death and resurrection as key to the future of nonhuman as well as human life: "The hope of the redemption of the body and the hope of the redemption of all creation from vanity are one" [1967, 214]. Thus, the heart of the Christian gospel, the Christ-event in terms of incarnation, death and resurrection, relates to theological hope for individual creatures.

Moltmann has always recognised the problematic nature of this theological hope in relation to scientific understandings of reality (core to Edwards' critique) but asserts, "The cosmic ideas of Christian eschatology are therefore not by any means mythological, but reach forward into the open realm of possibilities ahead of all reality" [ibid, 215]. In other words, current scientific concepts should not limit the scope of redemptive possibilities available in Christ. The bodily resurrection of Christ necessitates and inaugurates a radically new creation beyond the realms of scientific understanding.

The consequence for Christian believers is not to wait passively for Christ's new future to be revealed, but to participate in hope-filled anticipatory action (prolepsis) on behalf of both

human and nonhuman creation. Moltmann summarises it thus: “If the promise of the kingdom of God shows us a universal eschatological future horizon spanning all things - ‘that God may be all in all’ - then it is impossible for the man of hope to adopt an attitude of religious and cultic resignation from the world ... The pro-missio of the kingdom is the ground of the missio of love to the world” [ibid, 223-224].

Ernst Conradie’s concept, despite using superficially similar language to process theology, harmonises with Moltmann’s ideas and also addresses the apparent difficulties posed by scientific understandings of finitude and entropy. He argues for a multi-dimensional understanding of God and of reality, beyond the limits of space and time, so that whatever may happen to the current universe, “Christian hope trusts that the whole cosmos will be taken ‘up’ and transformed in this transcendent presence of God.” [Conradie 2000, 301 n.53]. As a result (quoting Bauckham’s summary of Moltmann), “all creatures as they are diachronically in the process of their history and in all their temporal relationships with other creatures, will be resurrected and transfigured in eternity” [Bauckham 1995, 203]. For both Moltmann and Conradie, therefore, core Christian understandings about the nature of God and the *telos* of creation dictate that new creation must include the redemption of every single creature from within the current creation.

iii. Can scientific predictions and theological visions of earth’s ultimate destiny be reconciled, with particular reference to biblical visions of peace between all creatures?

The notion that God’s ultimate future could involve the resurrection of every creature that has ever existed directly contradicts the second law of thermodynamics, which holds that the destiny of the universe and all its component parts is complete entropy. As Lesslie Newbigin puts it, “If nature has the last word, that is it. But that brings us to the crucial question, is nature a closed system?” [1990, 5].

Some theologians insist that eschatology must harmonise with scientific understandings concerning the future. Teilhard de Chardin [1959] and Thomas Berry [1988; 1999] argue for progressive evolutionary development towards an era of harmony within nature, as an ‘Omega point’ of the evolutionary process. This, however is simply to pick and choose which aspects of science to accept and reject, specifically preferring biological accounts of origins over the projections of physics regarding the entropic tendency of the universe.

Christopher Southgate, whilst not sharing the evolutionary optimism of de Chardin and Berry, also argues that evolutionary understandings mean rejecting literal interpretations of the ecotopian biblical visions of Isaiah 11 and 65 [Southgate 2008, 86-89; Willis Jenkins 2008, 120]. Southgate argues that a vegetarian paradise would be torture for predators, so argues for a new creation with 'perfect predators' where animals die quickly and painlessly.

Environmental ethicist Holmes Rolston III is equally critical of the theological case for animal redemption. He accepts Christ's incarnation has implications for nonhuman creatures, stating that "Divine presence in, with, and under natural history can plausibly be seen as Logos becoming enfleshed, incarnate" [2015, 275]. He further understands the suffering of Christ as reflecting the 'cruciform' nature of ecological processes and evolutionary history [ibid, 280-284]. However, he claims biblical accounts of resurrection and eschatological hope need to be subjected to contemporary biology [ibid, 285]. Thus, to apply the resurrection to nonhuman entities is "freewheeling slippage" [ibid, 275], and to speak of "glorified bullfrogs, oaks and marigolds is ... believing what approaches the incredible" [ibid, 272].

Although from different theological traditions, de Chardin, Berry, Southgate and Holmes Rolston all believe that biblical eschatology must conform to the predictions of modern science. That returns us to Newbigin's key question, "Is nature a closed system?" and its supplementary, "Can science predict the eternal future?"

John Polkinghorne, who straddles academic science and theology, asserts science "is concerned with what can be learned from, and extrapolated from, present physical process and, correspondingly, science's conclusions are limited in scope" [2000, 29]. Science helps us understand what is predictable and replicable about how the world works, but at the heart of Christian faith are convictions that God transcends the physical universe and can operate in novel ways. Understood as historical rather than metaphorical realities, the incarnation and resurrection could not have been predicted, even had modern scientific methods been available at the time. Furthermore, David Clough properly points out that a biblical understanding of sin's effects upon humanity and wider creation means that all scientific conclusions should be questioned in the light of theological assertions: "To insist against this that the life of the world we see around us is a reliable indication of God's creative purposes is to privilege our own independent observation of the world over basic affirmations concerning the doctrine of God that are biblically rooted and defended throughout the Christian tradition" [2012, 124].

To argue in favour of Christian hope, for both human and nonhuman creatures, means accepting that God has done something radically new in Christ's resurrection and its eschatological implications. David Kelsey, building on Moltmann and Pannenberg's concept of *adventus*, writes: "The eschatological future is not a future that is rooted in and grows out of the possibilities provided by any given present" [2009, 452]. Yet, because the resurrection has taken place as a space-time event, this radical new future has already proleptically begun, "the eschaton present ahead of time" [ibid, 453], or to use Christ's language, "The Kingdom of God is in your midst" (Luke 17:21).

Kelsey dismisses the evolutionary theologies of de Chardin and Berry in concluding that God's *adventus* blessing, "rules out use of metaphors of a cosmic physical or spiritual evolution into the eschatological kingdom" [ibid, 453]. Similarly, Moltmann rejects evolutionary science's capacity to predict God's future: "If Christ is to be thought of in conjunction with evolution, he must become evolution's redeemer" [1990, 258]. More recently, possibly in response to his critics, Moltmann has reiterated his belief that the Christ-born hope of the reconciliation to God of all things, including all creatures (Colossians 1:19-20), directly challenges the predictions of science: "It also cuts across the evolution of life on this planet through birth and death. But it is the most important thing we can say theologically about the future of the cosmos and the future of life" [2015, 131].

To conclude, belief in God's good purposes for all creation, including wild nature, from inception to renewal, leads inexorably to the theological conclusion, notwithstanding the scientific challenges this poses, that every creature God has made will participate in some way in the glorious redemption envisaged by biblical visions of new creation. This places an incalculable value upon the wellbeing of every creature, since God's good purposes involve the destruction of all suffering and, ultimately, of death itself. Although human action cannot expedite the full advent of God's new future, there remains, as we shall see, a moral obligation to live within the light of God's promise and purpose.

Peace or predation between creatures?

Christopher Southgate is not alone in his view that peaceful coexistence between all creatures, in which predators become vegetarian companions, would be a miserable existence for carnivores. C. S. Lewis famously stated, "If the earthly lion could read the prophecy of that day when he shall eat hay like an ox, he would regard it as a description not of heaven, but of hell"

[2002, 147]. Similarly, C. F. D. Moule, in his important short work *Man and Nature in the New Testament*, was of the opinion that, “If we believe at all in God as Creator, and in the evolution of species as part of his design, it seems we must accept universal predation as integral to it” [1964, 12].

Biblical scholars have taken a variety of approaches to interpreting the ecotopian passages of Isaiah 11 and 65, or Hosea 2. Hilary Marlow, writing about Isaiah 11, wrestles with “the biological impossibility of a carnivore eating grass” [2009, 240]. She lists various possible interpretations including the allegorical (the animals represent nations), the mythological (such passages are simply dreams of a better future), and the messianic, which she prefers, wherein the prophetic imagination uses “poetic hyperbole” to paint “a wide picture of the potentiality of YHWH’s ideal reign” [ibid, 241-242].

Yet, as we have seen, there is a convincing theological case that new creation’s mode of existence will be sufficiently novel to make the transformation of carnivores into vegetarians not only plausible but necessary. From the perspective of evolutionary science, Southgate’s concept of a new creation with ‘perfect predators’ which kill efficiently and painlessly is highly problematic. Clough points out that such a world would be anything but paradisaical for prey species and insists that “a Christian vision of redeemed creaturely life must be one in which predation is no longer a possibility for human or non-human creatures” [2012, 160].

It is, in fact, reductionist of Lewis and Moule to claim that a predator’s entire identity is tied to their carnivorous nature. Just as humans, who evolved as carnivorous omnivores, may choose to become vegetarian, so we may envisage the possibility of other creatures changing their diets. In a similar way to how former hunters and wildfowlers have moved from killing creatures to ‘capturing’ them through painting, photography or birdwatching so, surely, animals may retain their instincts but change their practices? Andrew Linzey makes this point well in stating, “it is not animality itself that is to be destroyed by divine love, rather animal nature in bondage to violence and predation” [1997, 75].

The biblical narrative begins with a ‘very good’ vegetarian creation where human and nonhuman creatures are given green plants to eat. Although palaeobiology suggests this was never historically the case, it presents an ideal of God’s purposes and of peaceful relationships within the whole creation. As Rogerson argues, in contrast to Genesis 9’s post-diluvian realism about carnivorousness and death, Genesis 1’s vision of a vegetarian world “is a challenge to

create a human society that will be capable of living in a world that is the kind of world that God intends” [2010, 29].

Moreover, if Christ’s resurrection is the basis for redeemed existence, we have a template to understand the extraordinary transformation involved in new creation is. If a physical body can become no longer prone to disease, death or entropy, we have moved beyond evolutionary possibilities. The risen Jesus was recognisably the same individual, yet there was discontinuity both in his appearance (noting the initial failure to recognise him in many New Testament resurrection accounts), and in his physical capacities. As McLaughlin says, “A vegetarian lion is no more an oddity than a human who neither defecates nor dies” [2014, 375].

Isaiah’s and Hosea’s visions are not isolated prophetic hyperbole to be reinterpreted in the light of biological understandings, as Marlow and others suggest. They are, rather, part of a consistent biblical theme of God’s inclusion of all creation within the scope of ultimate redemption, a hope seen in Messianic expectation and ultimately fulfilled in Christ. Thus, in relation to Isaiah and Hosea, Clough is right to state that “relationships of predation where the life of one creature is sustained only at the expense of the lives of others are not original or final indications of God’s creative and redemptive will” [2012, 121]. This is the tie-chord linking God’s delight in creation’s goodness in Genesis 1, the Noachic covenant in Genesis 9, the Messianic visions of Isaiah and Hosea, with New Testament descriptions of Christ as inaugurator of a new era of justice and peace (Matthew 5:3-12) and as the cosmic redeemer (Colossians 1:15-20) who will ultimately remake all things (Revelation 21:5).

iv. What connection, if any, is there between current human action to preserve wild nature, and God’s eternal purposes for nonhuman creation?

If biblical eschatology points towards a radically new future for animal life in a renewed creation, what place if any may human action play in pointing towards that ultimate existence? If humanity cannot construct new creation through its own effort, is the biblical eschatology described here any different in practice from the premillennial pietism of those who believe God will destroy the creation? Both, after all, place the emphasis on God’s sovereign action in redemption and consummation and appear to leave little space for human action.

Before turning to how the Bible addresses this dilemma, there is one vital difference in terms of ethical motivation between these two approaches. If God values all creatures sufficiently to

redeem them, then, even if humanity cannot contribute to their redemption, they are inherently worthy of respect. Those who believe in a purely spiritual afterlife still care for their own and others' physical bodies because they believe that God values each human being. By extension, if God values each individual creature we should work to avoid and ameliorate suffering, and to improve the wellbeing of all creatures. In a theo-eco-centric worldview, animal welfare and wildlife conservation become ethical priorities in much the same way as medical care and poverty alleviation in an anthropocentric worldview.

However, we may go further because biblical eschatology was decisively inaugurated in the resurrection of Christ as the firstfruits of new creation, and thus the future has already begun. N. T. Wright summarises this colourfully: "Jesus' resurrection is the beginning of that new life, the fresh grass growing through the concrete of corruption and decay in the old world" [2007, 134]. A theology of the Kingdom of God suggests a 'now and not yet' eschatology wherein human action today is in the light of what is to come, anticipates it, and even in some mysterious way proleptically contributes towards it.

At the heart of this tension between the 'now and not yet' is a Christological cosmology, summarised in the dense words of Colossians 1, where "every creature under heaven" (1:23) is included in the scope of the gospel of Jesus Christ in a drama that runs from before creation (He is "before all things," 1:17), through the act of creation itself (all things are "created in him," 1:16) and the ongoing sustaining of the universe ("in him all things hold together," 1:17), to the reconciliation of all things through the crucifixion (1:20). As Faricy puts it, "By his death on the cross, Jesus reconciled everyone and all of nature in himself to the Father. But this reconciliation, accomplished in principle on the cross, works itself out gradually in history towards the end of time, when all things will find their definitive reconciliation in Jesus" [1982, 49]. Although this final incorporation of all things in Christ is only implied in Colossians, it is explicit in Ephesians where the mystery of God's will is "to bring unity to all things in heaven and on earth under Christ" (1:9-10).

Thus, Christ's eschatological work in creation's ultimate renewal cannot be separated from his work in creation, sustenance and redemption. They form part of one seamless plan. The unity in Christ which is the ultimate destiny of all things, is a process initiated through the cross and resurrection and, moreover, it is a process within which the church, as Christ's body on earth, has a fundamental role. Several key New Testament texts relating to God's cosmic plans for creation link them to the church. Thus, in Colossians 1:18, in the midst of describing Christ's

cosmic role in creation, Paul writes that “he is the head of the body, the church; he is the beginning and the firstborn from among the dead, so that in everything he might have the supremacy.” Paul’s logic appears to be that because Christ’s physical resurrection body inaugurates new creation, and Christ’s spiritual body is the church, therefore the church is not only amongst the firstfruits of new creation but is also involved in the reconciliation of all things to Christ.

Such an elevated ecclesiology needs further support, which can be found in Ephesians, where the bringing of “unity to all things in heaven and earth under Christ” (1:10) is again linked to the Church: “God placed all things under his feet and appointed him to be head over everything for the church, which is his body, the fullness of him who fills everything in every way” (1:22-23). Thus, Faricy states that “all things will be recapitulated in Christ. And the church has a central position in this plan” [ibid, 8-9].

The highpoint of Pauline ecological ecclesiology, however, lies in Romans 8. The context is the climax of Paul’s exposition of the gospel, explaining what it means to live ‘in the Spirit’ and as God’s children, yet in bodies that are fallible and in the midst of a ‘groaning’ creation (8:22). Paul turns to future hope in declaring, “I consider that our present sufferings are not worth comparing with the glory that will be revealed in us. For the creation waits in eager expectation for the children of God to be revealed” (8:18-19). In this statement, followed by the image of the whole created order undergoing the pains of childbirth, awaiting its liberation from “bondage to decay” (8:21-22), Paul demonstrably links the church (the redeemed children of God) with a hope-filled longing for freedom within the natural world.

Written in the first century, when the church was a persecuted minority, the claim that the church’s ‘revealing’ has cosmic ecological consequences is both astonishing and outrageous. N. T. Wright puts it thus: “The whole creation is waiting in eager longing not just for its own redemption, its liberation from corruption and decay, but for God’s children to be revealed: in other words, for the unveiling of those redeemed humans through whose stewardship creation will at last be brought back into that wise order for which it was made” [2007, 213].

Wright’s claim that creation’s liberation is linked to the church’s stewardship is based on his exegesis of Romans 8:18-19. The text speaks of God’s redeemed children, the church, being ‘revealed’ (*apokalypsin*), suggesting divinely initiated unveiling. The context is unclear as to whether the church’s role is passive, revealed as exemplar of God’s redemption thus giving

hope to wider creation, or whether the church is ‘revealed’ through active participation in creation’s liberation. Wright takes the latter position by linking Romans 8 with humanity’s original calling to reflect God’s image towards creation (Genesis 1:28). Paul’s argument in Romans is, that the same sin that infected the first Adam, and thereby humanity, has caused “bondage to decay” (8:21) within the whole created order, and so the redeeming and liberating work of Christ, the new Adam, is to be applied to all creation. Humanity lost its ability to fulfil its Edenic calling to bear God’s image through caring for creation, but through Christ, the church is enabled to recover that calling and to participate, in the power of the Spirit, in God’s redeeming and restorative plans for the whole created order.

The ecclesial ecological eschatology we have discerned here is not unique to Paul. It is also evident in John’s Gospel, albeit disguised by John’s subtle use of imagery and allusion. Murray Rae argues that, in John, “the work of Jesus is the work of creation” [2008, 295]. Tracing an Irenaean transect from creation to consummation, he states, “We see the same pattern, I believe, in the Gospel of John. The work that Jesus does is the work of creation broadly conceived and it is through his work, executed in obedience to and in union with the Father, that creation attains its twofold goal – abundant life for God’s creatures in fellowship with the Creator and the manifestation of the glory of God” [ibid, 296].

Unhindered by apocalyptic, John’s is largely a realised eschatology, implicitly ecclesial in being directed to the community of disciples, and perceived through vivid natural imagery, such as the ethical imperative of walking in the light (8:12), becoming like a seed that dies in order to be fruitful (12:24-36), sacrificial service embodied in mutual foot-washing (13:1-15), and fruitfulness through abiding in the vine (15:1-17) [Koester 2008, 188-196]. The community of disciples are to live out the love, and share the abundant life they have experienced. They remain distinct from the world only in order to transform the world that God loves. Christ’s great prayer of John 17 has been convincingly shown to be a *midrash* on the Matthaean Lord’s Prayer [Walker 1982, 238]. Whereas, in the synoptics, Jesus teaches his disciples to pray for the earthing of God’s kingdom, John prefers the language of eternal or abundant life, and commissions his followers to share God’s life, God’s light, God’s love with the world of creation. Bauckham states it thus: “Now perhaps we can see why Jesus in this prayer does not pray for the world but for his disciples. It is because he is at this point entrusting the disciples with his own mission to the world” [undated, 3]. Similarly, Moltmann sees Christ’s invitation to “Abide in me, and I in you” (15:4), and Jesus and the Father’s mutual indwelling (14:11; 17:21), as expressions of *perichoresis*, “an ideal way of describing a community without

uniformity and a personhood without individualism” [2008, 372]. For Moltmann, this describes not only the mutual interpenetration of the Trinity, but the creation of a welcoming space for human and nonhuman creatures: “All creatures can enter into God and find their freedom and living space and home in the Trinity” [ibid, 375].

There is thus both a realised eschatology and a distinctively ecclesiological impetus in John. Rae points out how Jesus breathing on the disciples and saying “Receive the Holy Spirit” (20:22) is both John’s Pentecost and also a conscious echo of Genesis 2:7. Jesus, the Father’s Son, breathes the breath of new creation and gives fullness of life. As a result, “The pattern of new creation is to be continued in the church because the Son has given his Spirit for the continuation of his work” [Rae 2008, 299]. The Gospel that begins consciously with “in the beginning” (1:1), then launches new creation with Christ’s resurrection “on the first day of the week” (20:12). When Christ, whose mission spans creation, redemption and new creation, tells his disciples that they will do “even greater things than these, because I am going to the Father” (14:12), he is anticipating the pneumatological gift. It is an invitation into what David Ford calls “improvisation in the Spirit” [Ford 2014], in order both to build Christ’s church and to participate in the renewal of the whole creation. The deeper the Gospel of John is examined, the more clearly it is seen to be a profoundly all-encompassing vision of Christ’s work in re-creating and renewing all things, a work that is increasingly entrusted to those who follow Christ and climaxes with the commission, “As the Father has sent me, so I am sending you” (20:21).

This Pauline and Johannine vision of ecological ecclesiology is both extraordinarily ambitious and also potentially dangerous, particularly in a context where the church has been complicit in creation’s bondage and decay rather than a contributor to its liberation. Those who have accused Christian worldviews of undergirding environmental destruction may rightly be nervous at the braggadocio of a claim that nature needs more of the church! There is no room for hubris when Christians look at their track-record in terms of practical environmental action. James Lovelock has famously stated “I would sooner expect a goat to succeed as a gardener as expect humans to become stewards of the Earth” [1994, 116].

It is not surprising, therefore, that a number of theologians have also critiqued the notion of stewardship as, variously, not being a biblical term in direct relation to creation care [Horrell 2010, 6], being “too freighted with the baggage of the modern project of technological domination of nature” [Bauckham 2011, 62], consigning God to being an absentee landlord

[Palmer 2006], and showing an inappropriately feudal, managerial and dominating relationship with nonhuman creation [ibid].

At this point, it is important to introduce another major theological theme, which both addresses the problem of stewardship, and also fundamentally changes the relationship between Christ, humanity and wider creation, namely pneumatology. We have noted how John's Gospel links the gift of the Spirit to the disciples' commission to continue improvising upon Christ's work in the world. Similarly, the 'groaning' and 'liberation' of creation in Romans 8 follows an exposition on life in the Spirit. Paul is pessimistic about fallen human beings to living as they ought, but sees the Holy Spirit as providing believers with the same power as at work in Christ's resurrection (8:11), the power of new creation. Paul would probably agree with James Lovelock that humanity on its own has no more capacity than a goat to look after the garden of God's creation, but his pneumatology gives him confidence that redeemed humanity, equipped and emboldened by the Spirit, can indeed bring hope for creation's renewal.

Pauline and Johannine pneumatology provide answers both to critics of a hubristic understanding of stewardship, and to those who argue that redemption is God's work and humanity should leave 'saving the planet' to God. It is only the church in the power of the Spirit that can participate in creation's renewal, but responsive to the Spirit it can do no other. Creation waits expectantly "for the children of God to be revealed" (8:19), yet both the knowledge of being God's children and the power to live as such come from God's Spirit (8:14-17). Newbigin is thus right in arguing that the primary witness to God-in-Christ is not the church, but the Holy Spirit: "the essential witness to Jesus, according to the New Testament, is not our witness, nor the witness of the Church, it is the witness of the Holy Spirit" [1990, 3].

Moreover, the work of the Holy Spirit is not only within the church but within all of creation. In Romans 8, Paul weaves together the hope-filled groaning of creation (8:22) with the groaning of believers "who have the firstfruits of the Spirit (8:23), and the "wordless groans" of the Holy Spirit herself in interceding with God (8:26-27). It is probably this passage that Moltmann recalls in stating, "It is the Spirit of God that makes hoping human beings yearn for the redemption of the body from the fate of death, and the oppressed nonhuman creation sigh for redemption from transience" [2015, 129].

Biblical pneumatology must never be conflated with ecclesiology, because the work of the Spirit is always wider than the church. In Isaiah 32:15-16, we read a prophetic vision of peace, inaugurated by an outpouring of the Spirit not only on humanity but on all creation:

“till the Spirit is poured on us from on high, and the desert becomes a fertile field, and the fertile field seems like a forest. The Lord’s justice will dwell in the desert, his righteousness live in the fertile field.”

Commenting on this, Moltmann writes, “The fruitful outpouring of the Spirit extends not only to the human world but to nature as well” [2015, 130]. This is supported by a close look at Peter’s speech on the day of Pentecost. In explaining the gift of the Spirit to his audience, Peter quotes from Joel 2:28-32, often translated as, “In the last days, God says, I will pour out my Spirit on all people” (NIV). However, the term for ‘people’ is *sarx* in Greek (*bā-šār* in the Hebrew of Joel 2:28). As has already been argued, both words are best translated as ‘flesh’. *Bā-šār* is the term used for all animals in the Noachic accounts of Genesis 6-9. Perhaps translators were incredulous at the possibility that God’s Spirit might be poured out upon nonhuman creatures as well as on women, children and elderly, but this is the obvious meaning of the text and supported by Paul’s pneumatology in Romans 8.

Returning to the implications of pneumatology for human involvement in God’s eschatological purposes, it appears that the Pentecostal gift of the Spirit equips redeemed humanity to participate with the Trinitarian God in some mysterious way in the renewal and redemption of creation. This does not give humanity the right to dominate or exploit nature for anthropocentric advantage. Rather, it is a solemn mystery to be received with humility. As Rietkerk expresses it, the work of redeemed humanity in protecting and restoring creation are, “tiny and weak threads [which Christ will take] and weave them into new garments with which he will clothe the world” [1989, 29]. Similarly, McLaughlin summarises the idea of proleptic anticipation, in terms of its future orientation and also its tentative nature: “Human beings cannot ... construct the creation nova. However, they can embrace the creation anticipative [Moltmann’s term] by witnessing to eschatological hope. The witness is by the very nature of history’s disposition incomplete and imperfect” [2014, 379-380].

This is what N. T. Wright calls, “building *for* God’s kingdom” [2007, 205]. The work of individual Christians and the church as a whole, inspired and informed by the Holy Spirit, cannot inaugurate God’s kingdom but can contribute towards it. In 1 Corinthians 3:11-15, Paul

uses the analogy of a building. The foundation is Jesus Christ and without him nothing of lasting value can be constructed. However, God's people can build upon that solid basis, and it will only be at the time of eschatological fulfilment that the quality of construction will be revealed. We must retain a sense of provisionality about all our work, tentatively trusting God's Spirit that our efforts may be seen as "gold, silver and costly stones" rather than "wood, hay or straw" (1 Corinthians 3:12).

Evidence that the consummation of God's eschatological purposes incorporates both God's sovereign action and the best of human creativity (both nature and culture) can also be discerned in other eschatological imagery. In Revelation 21-22, the heavenly city combines Edenic references with an urban landscape of walls and buildings. This has alarmed some ecological commentators: "These images suggest that ideal forms of nature are domesticated and ordered, rather than wild and untamed" [Clough 2012, 163]. Clough also mentions the agrarian visions of Isaiah and Hosea as evidence that new creation has an anthropocentric focus; wild creatures are neutralised in terms of their threat to humanity. Yet, this is only part of the picture. Biblical imagery also includes Christ's peaceable presence with wild creatures in the wilderness (Mark 1:13). Commenting on this, Garlington states, "Paradise and wilderness in biblical theology are contiguous; what Adam was unable to do in the Garden, i.e. have dominion over the beasts of the field, Christ does in the wilderness; it is he who turns the wilderness back into a paradise" [2003, 90]. Elsewhere, Old Testament imagery of wild creatures (jackals, wild goats, owls, hyenas and falcons) re-occupying abandoned human habitation (Isaiah 34:8-17) is presented as a divine, pneumatological, initiative: "For it is his mouth that has given the order, and his Spirit will gather them together" (34:16).

The consequence must be that God's new creation will be a place of mutual flourishing for humanity and other creatures. It will not be a wilderness from which humanity is excluded, nor an urban jungle where domesticated versions of wild creatures entertain humanity. It will be a mode of existence wherein both wild creatures and human beings are fully able to express their redeemed natures without fear of each other. Clough is surely correct in his conclusion that, "Perhaps we might think of the redeemed wilderness as a place where other-than-human animals delight in being themselves before their God, and where redeemed humans might delight in their modes of living without threatening or curtailing them" [2012, 166].

Drawing this section to a conclusion, there are several important implications for individuals and the church. Firstly, the church needs to reimagine its role not simply as a ship of salvation

for humanity, but as an Ark of blessing for all creation. Moltmann proclaims that, “From its foundation and by its very nature, the church is cosmos-orientated” [1997, 118]. If the church is the body of Christ, brought to birth by the Holy Spirit, then it must necessarily reflect the Lordship of Christ and the renewing presence of the Spirit throughout all creation. As Moltmann argues, “It was a modern and a dangerous contraction when the church came to be narrowed down to the human world. But if the church is cosmos orientated, then the ecological crisis of earthly creation is the church’s own crisis, for through this destruction of the earth - the church is destroyed. When the weaker creatures die, the whole community of creation suffers” [ibid, 118]. Thus, ecological concerns should be present at every level of the church, from liturgy and catechesis to mission and practical organisation. Threats to biodiversity from the onslaught of human over-consumption of earth’s resources are not a marginal issue but directly relate to the Lordship of Christ in the church and the world.

Secondly, Christian involvement in the conservation and protection of wildlife is a moral imperative. We have seen both that the scope of God’s saving purposes includes all creatures, and that humanity has a particular role within this. Although ‘stewardship’ is problematic if interpreted in an anthropocentric managerial way, it can be helpful (as in Christ’s parables) as an image of human responsibility before God. As those created in the image of God, it is incumbent upon humans to protect and preserve wild creatures and their habitats. As Clough says, humans “are a species uniquely capable of taking a view as to what might lead to the flourishing of other creatures” [2012, 166]. In our action on behalf of fellow creatures, we need to have an understanding of our role that is both chastened by our poor past record, and yet hope-filled because of the enabling and renewing work of the Holy Spirit within us and the whole creation. Keeping in mind the servant-hearted nature of Christ’s ministry as the perfect image of God (Colossians 1:15), we should see ourselves as ‘servant-stewards’, recognising our dependence and fallibility as well as our privilege and responsibility.

Thirdly, humanity has a prophetic role in pointing towards the kind of world imagined by biblical prophets, inaugurated in the resurrection of Christ, and yet incomplete until the final renewal of all things. As we have seen, biblical eschatology is neither entirely realised nor fully in the future. God is already at work in the world through the Holy Spirit, and God’s new creation is coming towards the world from the future [Moltmann 1996]. McLaughlin is one of few scholars who wrestles with the tension between *Preservation and Protest* [McLaughlin 2014], in other words between our calling to protect and conserve nature in its present state,

even though that state involves the death, cruelty and waste inevitable in evolution, and our vision of a future when all suffering, carnivorousness and mortality will be transformed.

McLaughlin describes humanity's role "as sacramentally rendering present in history the eschatological peaceable kingdom" [ibid, 45]. He suggests this might mean, on the one hand preserving ecosystems where predator-prey relationships continue, whilst on the other choosing a vegetarian diet in anticipation of God's future transformation. We are to look after a system that is in need of profound eschatological transformation, but both personally and corporately we are called to take ethical decisions that protest against that system and proleptically anticipate its transformation: "Proper human interaction with the nonhuman creation is defined not by what is, but rather what will be, eschatologically" [ibid, 67].

Holding together this tension between conserving current ecological contexts and proleptically pointing towards God's new creation is described by McLaughlin as "cosmocentric conservation". He states: "Advocates of cosmocentric conservation will avoid hunting a deer, devouring a cow, or injecting shampoo into the eyes of a rabbit while at the same time protecting ecosystems in which deer are hunted and devoured and rabbits suffer" [ibid, 400-401]. What this means in practice is consciously living in two realities, similar to Christ's prayer for his disciples in being "in the world" but "not of the world" (John 17:11-17). We inhabit a world where the transient beauty and cruelty of a natural system based on evolution and predation are at work. We encourage the flourishing of all God's creatures within the world's ecosystems, allowing nature to take its course but actively intervening where the consequences of human greed, mismanagement and waste are destructive for wildlife and ecosystems. At the same time, we join in creation's, and God's Spirit's, longing for release from the bondage to decay that is intrinsic to the current order and, where possible, we seek to live in the light of God's promised future, where all creation will live in harmony.

This section, examining the connection between human action and God's transforming purposes, has anticipated answers to some of the key questions this thesis regularly returns to, and it is now time to draw these threads together:

1. Why do we value wild nature?

It is the resurrection of Jesus Christ which provides the key to understanding the value of wild nature in eschatological terms. In Christ's risen body, material creation, which had been blessed

in the incarnation, is transformed into matter of eternal value. Although biblical apocalyptic is inherently ambiguous, allowing passages taken out of context to be interpreted in ecologically negative ways, such views become incoherent in the light of the overall biblical arc of God's purposes in creation, sustenance and redemption. Instead, careful textual and contextual analysis reveals a clear message of hope beyond judgment and, moreover, affirms repeatedly that such hope includes nonhuman creatures and the created order itself. Thus, we can value wild nature because it will be renewed, rather than rejected or replaced.

The primary direct eschatological references to nonhuman creatures and wild nature are contained in the Old Testament's visions of dangerous wild creatures living harmoniously alongside humanity in God's peaceable Kingdom. There are also sparse and theologically complex references throughout the book of Revelation. Whilst this paucity of explicit reference to wild nature demonstrates that the immediate horizons of biblical authors were often perspectively anthropocentric, it does not undermine the teleological theo-eco-centrism of biblical eschatology overall. The witness of both the Hebrew scriptures and the New Testament is that the value of both human and nonhuman is ultimately found in the whole creation's worship of God (Isaiah 6:3 [Van Leeuwen 2005], 11:9; Habakkuk 2:14; Revelation 5:13).

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?

The debate between conservationists who primarily value biological status, and animal advocates who defend the worth of individual creatures is intense and at times acrimonious. It reflects a divergence within contemporary philosophy and ethics which is alien to the integrative Hebraic mindset. Biblical eschatology renders both secular understandings of science and of individual rights as marginal to a resolutely theocentric focus. This is God's world in creation, covenant, redemption and eschatological consummation.

The ultimate destination of all creaturely life and of the whole cosmos is a transformed existence, where current understandings of biology will be recast entirely. The biblical vision of peaceful coexistence between creatures may reassure those concerned with animal suffering, as it is a realm of being where suffering, predation and even death itself will no longer exist. It is, however, somewhat disturbing for those who see carnivorousness as intrinsic to the biological status of certain species. Evolutionary understandings of the relative importance of

particular types of creature are secondary to, and transformed by, biblical eschatology. Future existence will not be constrained by predation or the cruelty inherent in natural selection.

The question as to whether every individual creature will be ‘saved’, or representatives of every kind, has been discussed above. The canonical scriptures do not address this question explicitly, but this thesis takes the view that attempts to answer it should be consonant with the theo-eco-centric cosmic theological hermeneutic we have discerned whilst alert to, but not driven by, philosophical and scientific concerns. For that reason, the approaches of process theology (Whitehead, McDaniel) are rejected as taking insufficient account of the material nature and Christocentric orientation of new creation. If Moltmann is correct that, “if we were to surrender hope for as much as one single creature, for us God would not be God” [1996, 132], then every creature of all species should be treated as of eternal value.

Biblical ecological eschatology demands that all living creatures are treated with the respect concomitant with being a creature of value to God. Whilst we exist in a fallen world where suffering, death and predation are inevitable, we also live with a vision of another world – a renewed and redeemed creation – where peace between all creatures is possible. It is therefore incumbent upon followers of Christ to live in proleptic anticipation, conserving predator and prey alike, mourning the inevitability of suffering and death, and seeking to reduce harm as far as possible in the light of future peaceful companionship.

3. Can and should we put an economic price on nature?

Biblical eschatology refuses to instrumentalise wild nature. Whilst, in apocalyptic literature, the earth and its creatures are often subject to God’s devastating judgment, we have seen that interpretations suggesting nature’s complete obliteration are mistaken. Rather, creation is the innocent victim of the cleansing judgment unleashed by humanity’s sin. When Revelation 12:12 speaks of “woe to the earth and the sea”, it is not a curse but a lament [Rossing 2002, 181]. The independent value of creation is affirmed when heaven and earth are reunited, God’s kingdom is once more “on earth as in heaven” (Matthew 6:10; Revelation 11:15), and judgment is visited upon “those who destroy the earth” (Revelation 11:18).

Thus, whilst the nature of eschatology means the question of nature’s economic value is never addressed directly, the implication is that great caution is needed in using utilitarian methods to speak of the value of entities that are eternally valuable. It may be that addressing the urgent

need to conserve wild nature in the face of relentlessly dominant economic forces necessitates the tactical use of economic valuations. However, there is a real danger of winning minor battles but losing the ideological war in terms of wild nature's true worth. Economic valuations of nature tend to emerge from a deeply anthropocentric, utilitarian and ultimately idolatrous worldview. Ecological eschatology insists that true worth is defined in relationship to God alone, and humanity's task is to protect wild nature in the service of its ultimate purpose, which is to worship God in anticipation of its glorious transformation.

4. What is an appropriate ecological anthropology?

The distinctive contribution of eschatology to ecological anthropology both relativises and amplifies insights from elsewhere in scripture. Humanity's ability to care for creation is given perspective by the radical regeneration of creaturely life and the earth itself foreseen in prophetic visions and apocalyptic imagery. Our attempts to conserve and protect our fellow creatures and their habitats will be subsumed in a transformation so fundamental that our efforts pale into insignificance. Yet, remarkably, just when notions of stewardship and guardianship appear to be rendered redundant, humanity's role is redefined ecclesiologically and pneumatologically.

N. T. Wright's interpretation of Romans 8:19 as, "the unveiling of those redeemed humans through whose stewardship creation will at last be brought back into that wise order for which it was made" [1997, 213], suggests an ecclesial reorientation for ecological anthropology. It is the church, the community of persons renewed in Christ and filled with the Spirit, who the New Testament suggests will play a decisive role in creation's liberation. This leaves no room for arrogance or exclusiveness, given both humanity's and the church's past records and the Spirit's renewing work in society and creation beyond the church. What it provides, instead, is the impetus for a re-imagining of what church is and can be. If the church "exists not for its own sake but for the sake of the kingdom" [Dulles 2002, 95], then its ultimate mission must be wider than its institutional presence or the conversion and discipling of human beings. It must be nothing less than the earthing of heaven (Matthew 6:10), lived out in seeking to demonstrate and anticipate creation's coming renewal. Involvement in practical conservation projects, engaging with others in campaigns on climate change and biodiversity loss, and worshipping in ways which consciously participate in the praise, lament and groaning of nonhuman creation are, thus, all practical ecclesial outworkings of an eschatologically-informed ecological anthropology.

CHAPTER 6

WHY SHOULD WILD NATURE BE PRESERVED?

CONCLUSION AND REFLECTIONS

This thesis has attempted to facilitate a conversation between the disciplines of biblical theology and conservation biology, with respect to current anthropogenic threats to wild nature and contemporary debates regarding the valuation of biodiversity and wild nature. Both the ‘mission-driven’ scientific discipline of Conservation Biology [Soulé 1985] and the wider wildlife conservation movement are involved in a crisis-led attempt to engage the attention of policy makers, politicians and economists with the urgent need to protect species and ecosystems. In addition, having undergone a century-long process of secularisation, there is now a belated recognition on the part of many within the conservation movement that world faiths are integral to the search for motivations deep enough to change human behaviour if a massive collapse in global species richness and biospheric integrity is to be avoided [IUCN 2016i; WWF/ARC 2006].

It is proposed that the resources of biblical theology are necessary not only to address the current anthropic crisis in biodiversity, but also to answer the deeper question of why wild nature should be preserved. Theology addresses the ethical and philosophical questions at the heart of what it means to be human in a world of many diverse species. Whilst this thesis is limited to canonical texts accepted by mainstream Christian churches, it is important to consider the contributions of each faith traditions on its own terms. It is hoped, therefore, that this work will stimulate dialogue with those of other world faiths as well as secular conservation scientists. Religions have much to bring to conservation, not only numerically,¹⁹ in terms of the economic resources they control [Bhagwat and Palmer 2009], or the ‘sacred lands’ they protect [WWF/AR, 2006], but because they offer profound insights into the value of wild nature.

Four key subsidiary questions pertinent to the main issue of why wild nature should be preserved have been identified, for each of which biodiversity conservation requires broader philosophical and ethical grounding, and upon which biblical theology sheds light:

1. Why do we value wild nature?

¹⁹ 80+% of the world’s population state religion plays an important part in their daily lives [Crabtree and Pelham 2009].

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?
3. Can and should we put an economic price on nature?
4. What is an appropriate ecological anthropology?

The heart of this thesis has examined how biblical theology might seek to address these questions, notwithstanding the interdisciplinary and hermeneutical challenges involved. The biblical corpus consists of writings that are diverse in style, context, authorship and standpoint, with many centuries of interpretative debate surrounding them. It is thus facile to seek a common voice or linear argument. Canonical and systematic approaches are rightly critiqued when they fail to take account of contradictory voices and attempt to impose uniformity. However, within biblical wisdom literature, and the book of Job in particular, we have described an approach to scripture as “polyphonic text” [Newsom 2009, 11ff], recognising internal dialogue and dialectical tensions, yet discerning intimations of a “nonmodern metanarrative” [Bauckham 2003, 47] that speaks through and beyond the difficulties and divergences of the text.

As we have surveyed major biblical themes in turn, we have noted a consistent tension between approaches to nonhuman creation that are teleologically theo-anthropo-centric and teleologically theo-eco-centric. Even within a theocentric worldview it appears there is a continual gravitational pull towards seeing nature as created for human use and enjoyment alone, or as unimportant in relation to humanity’s eternal destiny. Within biblical texts, passages such as Genesis 1, Psalm 8, 1 Kings 3-10, Matthew 21:18-22, Mark 5:1-20, 2 Peter 3 and parts of Revelation can all be interpreted in ways that either permit unconditional human exploitation of nature, or diminish its material importance.

However, within the internal dialogue of canonical scripture, a narrow focus on human interests is challenged, time and again, by a larger vision of God’s purposes for the whole created order. There appears to be a liberative, generative, ever-broadening purpose within God’s interactions with humanity. This is what Sittler, in relation to the New Testament’s witness to Christ, calls “a momentum and directionality ... This circle spins out in larger and larger orbits until ... it enfolds “all things” as destined in Christ to be interpreted as existing “to the praise of His glory” [1972, 334].

In the Hebrew scriptures, the people of Israel are challenged to move beyond tribalism and nationalism, and to envisage themselves as “a light to the Gentiles” (Isaiah 49:6). Similarly, the early Church was provoked to see the Gospel as good news for Greeks, slaves and women as well as Jews and freemen (Acts 10; Galatians 3:28). With slavery and the place of women, it has taken many centuries for the Church to awaken to the divine call to welcome the ‘other’. So, this thesis has argued, there is a further dimension to the centrifugal force of God’s compassionate love. It is, that to be truly human entails seeking the thriving of all that God has created, sustains, redeems and promises to renew. This is what Kelsey refers to as *Eccentric Existence*, defined as an existence “centred outside itself in the triune God in regard to its being, value, destiny, identity, and proper existential orientations to its ultimate and proximate contexts” [2009, 893]. To be truly human is not to focus on human thriving alone but to seek the flourishing of all creation.

This divine centripetal tendency has been discerned through identifying four distinctive divine biblical initiatives towards the whole of nature, and discussing the four core questions in relation to each. These are described in a way that is original to this thesis, but draws both on Kelsey’s “irreducible triple helix” of creation, consummation and reconciliation [ibid.], and N. T. Wright’s five act drama of creation, fall, Israel, Jesus and Pentecost onwards [Wright 1991; 1992, 131-143]. The four divine initiatives respectively consist of the process of creation itself (*creatio originalis* and *continua*), God’s covenants with humanity and the earth, Christ’s incarnation, life, teaching, death and resurrection, and God’s eschatological purposes in the consummation of all things. Each of these interventions is theologically distinct and presented in the biblical texts as arising entirely from divine initiative, rather than human design. They comprise, together, an overview of God’s good purposes towards all that God creates, enters into relationship with, seeks to redeem, and draws into final consummation.

The first major theological chapter re-examined the creation texts of Genesis 1-3 (especially 1:26-28 and 2:15), in the light of the book of Job and other biblical Wisdom literature. It argued that these texts invite an eco-theological anthropology placing humans in a role of ‘steward-servant’ vis-à-vis other species. Holding together the twin concepts of humanity as ‘image of God’ and ‘dust of the earth’ retrieves a balance between the extremes of contemporary anthropocentrism, as critiqued by White [1967], and the ecocentrism proposed by deep ecologists such as Arne Naess [1984], instead suggesting a theo-eco-centrism within which humanity remains part of the community of creatures yet called apart to particular roles and responsibilities within that community. Reading the book of Job alongside the Genesis creation

accounts allows a notion of the ‘community of creation’, within which understandings of stewardship need to be framed. The chapter concluded with a chastened conservationist motif, avoiding overconfident assumptions of the beneficial results of human interventions in nature. Rather, influenced by biblical Wisdom and replacing hubris with humility, humanity’s role is seen as secondary to God’s involvement in ‘serving and preserving’ nature, and dependent on learning from nature as well as exercising human reason and creativity.

The second theological chapter argued that the Noachic covenant (Genesis 6-9) is paradigmatic for a covenantal approach to divine purpose in the redemption of all creation. The divine initiative in embracing humanity, all living creatures, and the earth itself within a single eternal covenant leads to Old Testament theologies of the land, not as a geo-political but as an ecological entity - the ‘biotic community’ – within which harmonious relationships within and between humanity, domestic and wild creatures, and God, are explored [Brueggemann 2002; C. J. H. Wright 1990; E. Davis, 2009a; W. Berry 1981, 1986].

In the third theological chapter, a Christocentric theology of wild nature was developed. The cosmic Christ of Pauline and Johannine theology provides a hermeneutical lens through which the historical Jesus of the synoptic Gospels can be understood as incarnate creator, sustainer, redeemer, renewer and teleological orientation of all creation. The chapter revealed both continuity with the Hebrew Bible and a Christocentric reorientation of God’s purposes for all creatures and all creation. Within the redemptive and restorative work of Christ in inaugurating the reconciliation of all creatures and all things, the place of humanity – specifically the church - in responding to the fullness of Christ’s work through enabling creation’s flourishing, was explored, along with the ethical dimensions of becoming ‘more like Christ’ in virtuous and anticipatory reconciliatory and redemptive relations with non-human creatures.

The fourth theological chapter examined eschatological approaches to the biblical text, arguing that Old Testament visions of the ‘peaceable Kingdom’ and New Testament understandings of the physically resurrected Christ as the final destiny of all things, provide hermeneutical keys to interpreting apparently ‘ecologically negative’ texts. The nature of apocalyptic encompasses both continuity and discontinuity, hope and judgment, yet a careful examination of texts reveals that creation’s final *telos* lies in its renewal in Christ. Questions regarding the compatibility of scientific and theological perspectives on the future of the earth and creaturely life were discussed, concluding that, for the person of faith, theological insights give the clearest, albeit suggestive rather than definitive, guide to the future. Thus, Old Testament visions of ‘shalom’

between humanity and other creatures should not be dismissed, but enable a Christian vision of wild nature to depart from scientific determinism in offering hope, and in inspiring ecclesial responses and individual lifestyles embodying proleptic anticipation of God's ultimate renewal of all things.

This concluding chapter will now revisit the key questions outlined earlier in the light of insights garnered from biblical theology, and attempt thereby to construct a basis for human engagement with the preservation of wild nature, and bring this into dialogue with current debates within biodiversity conservation.

1. Why do we value wild nature?

The reasons why wild nature should be valued and preserved inevitably overlap with the question of an appropriate ecological anthropology, since it is how *humans* value wild nature that is in question. In order to disentangle these threads, this section will largely be axiological, focussed on the ethical basis for preserving wild nature, and the later section anthropological, on models for human engagement with nature.

In an influential recent article in *Science* entitled *Whose Conservation?* Georgina Mace outlined four approaches to global nature conservation over the past 50 years. She identified these, consecutively, as 'Nature for itself' (intrinsic value, wilderness, protected areas), 'Nature despite people' (attempts to reduce and reverse human threats to nature), 'Nature for people' (valuing nature through its ecosystem goods and services), and 'People and nature' (a dynamic relationship incorporating insights from social as well as ecological sciences) [Mace 2014]. Mace concludes that, whilst all four are currently advocated and practised, 'People and nature' provides the most coherent and inclusive model for future practice.

Mace's article has been widely referenced [Pearson 2016], and provided a basis for the 2015 Cambridge Conservation Forum symposium. It contains much that is useful, although its historical analysis is flawed, particularly in arguing that conservation until the late 1960s was largely about 'nature for itself'. As we shall see, from the beginnings of the modern conservation movement there has been a fault-line between the 'preservationists' (nature for itself) and the 'conservationists' (nature for people), a divide that belies a fundamental divergence on the basis for environmental ethics regarding the place of humanity in a world of many species, and in turn reflects two streams within Judaeo-Christian thought.

Normative ethical theory holds three broad approaches: deontological, consequentialist, and virtue-based ethics. We will return to virtue-based ethics later, but historically, the ethics of nature conservation and preservation have largely been based on the first two of these. Deontological ethics posit that an action is always right or wrong, based on religious belief (divine *fiat*) or duty towards universal Kantian ‘rational’ values. Although Kant saw animals as sub-rational and therefore incapable of being moral subjects [Kant 1997, 212-213], some contemporary ethicists extend the moral community to include all sentient creatures [Regan 2001; Singer 1979, 1995, 2010].

Many of the earliest advocates of wildlife conservation effectively based their views on deontological ethics, believing in the intrinsic value of all creatures (nature for itself), although few used philosophical language to justify their convictions. John Muir (1838-1914), the inspiration of the American wilderness movement, explicitly denounced anthropocentrism, stating, “The world, we are told, was made especially for man, a presumption not supported by the facts” [1991, 136]. He also attacked utilitarian attitudes to nature in arguing, “Wilderness is a necessity ... mountain parks and reservoirs are useful not only as fountains of timber and irrigating rivers, but as fountains of life” [Muir, in Scheuering 2004,1].

Muir had been brought up in a strict Calvinist home and, whilst rejecting his parents’ fanaticism and befriending transcendentalists such as Ralph Waldo Emerson, he retained a broadly Christian worldview. The only book he carried on his wilderness journeys was the Bible, and he spoke frequently of a creator God (rather than a divine creation), on one occasion comparing Yosemite to the Garden of Eden, whose “boundaries were drawn by the Lord” [Muir 1896].

If Muir remains the icon of the American conservation movement, the British clergyman and writer John Ray (1627-1705) was the “father of natural historians” [Berry 2001]. Ray was equally clear that anthropocentric understandings of humanity’s valuation of nature were inadequate. In his magnum opus, *The Wisdom of God Manifested in the Works of Creation* (1691) he wrote: “It is a generally received Opinion, that all this visible World was created for Man; ... But though this be vulgarly receiv’d, yet wise Men now-a-days think otherwise. ... For if a good Man be merciful to his Beast, then surely a good God is bountiful and benign, and takes Pleasure that all his Creatures enjoy themselves” [Ray 1717, 175-176]. For Ray, as for Muir, values in nature are deontologically derived, in both cases positing an inherent value in nature independent of its usefulness to humanity but related to divine creation and valuation.

Social historians analysing attitudes to nature in early modern Britain have amassed considerable evidence of links between growing concern for animal welfare and Protestant groups including Puritans, Quakers and Evangelicals. Keith Thomas writes that the “initial impulse” for campaigns against bear-baiting, cock-fighting and vivisection was “strongly religious” [1983, 180], and Rod Preece notes that the early publications of organisations seeking animal welfare “have a very strong evangelical Christian bent” [1993, 36]. Similarly, the same group of influential evangelicals and Quakers who challenged social attitudes on slavery, prison-reform and universal education also campaigned for the better treatment of animals both in captivity and in the wild [Bookless 2016, 108-109]. Like Ray and Muir, their motivation was a belief that nature had independent value as God’s creation and that human beings are uniquely responsible to God for the ‘stewardship’ of all creatures, domesticated and wild.

Today, many biologists and conservationists assert a belief in the intrinsic value of nonhuman creatures without identifying any clear philosophical basis for this [Callicott 1995; Zimmerman 2001]. Michael Soulé, one of the founders of Conservation Biology, simply states as self-evident that, “biotic diversity has intrinsic value irrespective of its instrumental or utilitarian value” [Soulé 1985]. The link between the Christian concern for nonhuman creatures seen in Muir, Ray and others, and contemporary conservationists’ deeply-held belief in nature’s intrinsic value, appears to be an assumption implicitly based on Judaeo-Christian beliefs, and still significant in forming cultural attitudes even when those beliefs are no longer held.

Alongside deontological models for valuing ‘nature for itself’, there is an equally long history of consequentialist justifications for protecting ‘nature for people’. Consequentialism regards moral choices purely in terms of their effects, with positive results justifying certain actions. Its western origins, in Jeremy Bentham (1748-1832) and John Stuart Mill (1806-1873), were utilitarian and largely anthropocentric, regarding ethics as maximising the greatest good for the greatest number of human beings. Although Bentham himself gave regard to animal pain as a moral issue, stating “the question is not, can they reason? nor, can they talk? but, can they suffer?” [1876, 311], the notion of nonhuman creatures deserving ethical consideration, was largely alien to the origins of consequentialism.

G. P. Marsh (1801-1882) was a proto-ecologist who studied humanity’s destructive impact on ecosystems and advocated practical intervention. Within a conventional Christian worldview, he saw humanity’s role as managing or stewarding nature, within divine constraints, for the

benefit of future generations. He wrote, “Man has too long forgotten that the earth was given to him for usufruct alone, not for consumption, still less for profligate waste” [in Van Dyke 2010, 95]. Gifford Pinchot (1865-1946), influenced by Marsh, helped establish the fledgling discipline of conservation, which he defined as, “the application of common-sense to the common problems for the common good” [in Scheuering 2004, 31]. This fundamentally utilitarian understanding was reflected in the “Empire forestry” approach, originating in 19th century Germany, which spread to India and thereby throughout the British Empire, seeking to manage forests both commercially and for long-term human benefit. It has even been argued that, “Environmentalism, in the sense of practical action, began in 1855 in India, with the Forest Charter. This charter defined the right of the state over ‘nature’, proscribed private interests, and initiated a new system of forest management” [Barton 2002, 163].

Some contemporary consequentialists have sought to extend the moral community to encompass sentient animals. Attfield and Dell argue that, “Entities deserve consideration only if they can suffer; entities that cannot have preferences, or joy or suffering, cannot claim consideration in themselves” [1996, 41]. Peter Singer [1979; 1995; 2011], Gaverick Matheny [2006] and others have proposed a utilitarian animal rights approach wherein animal and human suffering are commensurate, so animal suffering may be justified only where the good gained outweighs the suffering caused, irrespective of whether that suffering is to humans or nonhumans. However, Anders Melin points out the impossibility of reciprocity: “Humans are the only being we know of who have the capacity to act as moral agents. We can owe duties to other creatures, but they cannot owe duties towards us” [2009, 373], so, to take a practical example, the suffering caused to people by a man-eating tiger may outweigh the suffering caused by killing the tiger, but no blame may be attached to the tiger since it is not a moral agent.

To summarise the argument thus far, from the origins of the modern wildlife conservation movement in North America and Europe, both deontological and consequentialist approaches were adopted. The broad divide between the preservationism of Muir, Emerson and Ray (believing in nature’s intrinsic value and seeking to protect wilderness from human interference [Oeschlager 1991]), and the conservationism of Marsh, Pinchot and Empire Forestry (advocating the sustainable use of natural ‘resources’), reflected deontological and consequentialist approaches respectively, both views being justified on biblical grounds.

This fundamental divide is reflected in current arguments about the appropriateness of using economic language to attribute value to nature [Mace 2014; Tallis et al. 2014]. As will be discussed later in relation to the third core question this thesis addresses, those who believe in nature's intrinsic (deontological) value are troubled by the implied relativisation and monetisation of nature, whereas those who seek to protect nature pragmatically through incorporating its ecosystem services into economic systems are following a utilitarian, consequentialist approach.

Mace's fourfold categorisation belies a fundamental philosophical bifurcation between two basic attitudes: 'nature for itself' (ecocentric worldview; Thoreau, Muir, Aldo Leopold, Arne Naess and the deep ecology movement), and 'nature for people' (anthropocentric worldview; Marsh, Pinchot, 'ecosystem services'). Her other two categories represent variations on these two key themes: 'nature despite people' is a more realistic form of 'nature for itself' conscious of the threats posed to nature by human overpopulation and overconsumption, whilst 'people and nature' is often a less exploitative form of 'nature for people', although it has the potential to give an altogether different approach, as we will see.

As suggested earlier, both 'nature for itself' and 'nature for people' draw from Judaeo-Christian biblical concepts. The former, appealing to intrinsic value and deontological ethics, is seen in God's valuation of nature as 'very good' (Genesis 1), the Noachic covenant with all creation (Genesis 9), and passages celebrating biodiversity such as Psalm 104 and Job 38-41. In contrast, the latter, tending towards anthropocentrism and pragmatic consequentialism may find foundations in notions of humanity as the *imago Dei* with a stewardship mandate to manage nature responsibly for human thriving (Genesis 1:26-28; Psalm 8). Both Muir and Pinchot argued their case by reference to scripture and Christian values.

This thesis argues that, ultimately, neither 'nature for itself' nor 'nature for people', neither purely ecocentric nor anthropocentric approaches, and neither preservationist nor conservationist approaches based on deontological or consequentialist ethics, capture the complexity of the full biblical witness to God's valuation of wild nature and humanity's place within it. Whilst selective interpretation of specific texts allows versions of both ecocentric and anthropocentric approaches to wild nature, the overall canonical biblical witness decisively rejects any dualistic polarity between the interests of wild nature and of humanity, placing both within a wider orbit of God's purposes from creation to new creation. This fundamentally theo-eco-centric approach to humanity's role within nature may incorporate strategies which appear

to be deontological (divine directives) or consequentialist (compassion for all that God has made), but are only truly understood when placed within a theocentric framework, where humanity's place – as we shall see – is to reflect the *imago Dei* in developing and expressing virtuous character towards God's creation. Creation is made by and for God. Wild nature is humanity's to enjoy, use carefully, protect and nurture, but never to destroy or exploit.

Within a theo-eco-centric biblical worldview, the source of all value in creation is ultimately neither fully utilitarian nor intrinsic, but contingent upon God's valuation of creation from source to consummation. Humans and other living creatures share the *nishmat chayyim*, the living breath of God (Genesis 2:7, 19). All creatures, human and nonhuman, are thus inherently valuable irrespective of their usefulness, either to humanity or within an ecosystem. In terms of the canonical witness as a whole, the Old Testament thus answers the question "Why do we value wild nature?" in three interlinked ways:

- Because God creates, sustains and values all of creation, including wild nature.
- Because wild nature has inherent God-given value independently of its perceived beauty or usefulness to humanity.
- Because humanity has been entrusted with a particular role, an 'eccentric vocation' [Kelsey 2009], in terms of reflecting the image of God through the cultivation of virtuous character directed towards the flourishing of all creation, specifically including wild nature (Genesis 1:26-28).

The New Testament both affirms and reframes these creational motivations. God's covenant with all creation is placed within a Christocentric cosmological teleology in which humanity and wild nature are caught up into God's redeeming purposes. All material creation is affirmed through the incarnation, in which God becomes *sarx*, or animal flesh (John 1:14). God's redeeming love, expressed through Christ's death and resurrection, is directed towards the whole created order (Romans 8:20-21, Colossians 1:19-20), and an eschatological vision of renewal beyond judgment provides hope for wild nature. Within this, humanity's unique role is affirmed in terms of creation's "eager expectation" of redeemed humanity. Thus, in New Testament terms, seeking wild nature's fruitfulness through biodiversity conservation becomes the missional task of recognising the Lordship of Christ over all creation (Philippians 2:10-11).

The three creational answers to the question "Why do we value wild nature?" identified above can, therefore, be reframed Christologically in the light of the New Testament as follows:

- Because, through Christ's incarnation, God enters and identifies with the life of all living creatures.
- Because the whole created order is encompassed in Christ's work of redemption, reconciliation and renewal.
- Because redeemed humanity, transformed by the Spirit, is called to anticipate the final renewal of all creation, through Christlike character and behaviour.

Applying this theo-eco-centric perspective to the contemporary conservation debate sheds light on Mace's fourfold categorisation. Neither 'nature for itself', 'nature despite people', nor 'nature for people' reflect a theo-eco-centric worldview. However, Mace's final categorization of 'people and nature', which she herself advocates, offers opportunities for engaging Christian theology with the current conservation debate. Yet, 'people and nature' itself needs refining since the phrase implies two distinct entities, whereas a theo-eco-centric worldview holds people and nature together, rejecting anthropocentric-ecocentric polarities.

Insights from the integrative biblical worldview advocated by this thesis suggest that 'people and nature' should rather be re-framed as 'people *within* nature', a substantially more appropriate description both scientifically and theologically. 'People within nature' conveys humanity's utter dependence on healthy ecosystems as well as implying the value of nature as a whole. For all who share belief in the Creator's good intentions towards the created order, 'people within nature' properly belongs within a theo-eco-centric teleological framework of purposeful beneficence. For those who do not share such a worldview, 'people within nature' nevertheless may provide a conceptual basis to explore ecological values of interdependence and mutual flourishing which are commensurate with biblical values.

As Mace points out, finding appropriate metrics for such an approach is much more complex than the simpler counting of species and measuring of natural 'goods', but it points to the convergence of ecology and economics (both derivatives of *oikos*) which is vital for a sustainable future. What is called for is political will and the appropriate legal constraints and financial incentives to ensure that the 'success' of governments and conservation bodies is measured not simply in terms of Gross National Product, economic growth or lists of numbers of species, but in terms of human thriving within flourishing ecosystems.

2. Does the value of nonhuman creatures lie primarily in their biological status or in their life as an individual creature?

The question as to whether the value of wild nature is located in individual creatures, in their biological status as species, or even in their functional role within ecosystems, has become the subject of heated debate, particularly between conservation science and animal welfare groups [Bekoff 2007; Perry and Perry 2008; Hutchins 2008]. For example, many ecosystems globally have seen endemic species driven to extinction by the introduction of non-native predators or competitors [Elton 1958; Simberloff 1995; Vitousek et al. 1997b]. An ethical dilemma ensues regarding the eradication of ‘invasive’ species in order to protect ‘native’ species and appropriately humane methods of doing so.

Broadly speaking, conservation biologists tend to see invasive species as ‘pests’, habitually employing the cheapest effective methods to eradicate them (including poison, trapping or shooting) [Hutchins and Wemmer 1986], whereas advocates of animal welfare argue individual sentient creatures possess rights which preclude unnecessary cruelty [Singer 1979, 2010; Regan 1983]. Many conservationists argue that “individuals have value in virtue of the contribution they make to ecosystemic functioning” [McShane 2009, 411], in other words that ecosystems should take priority over individual creatures. Hutchins categorically states, “It is time to face up to the fact that animal rights and conservation are inherently incompatible and that one cannot be an animal rights proponent and a conservationist simultaneously” [Hutchins 2008, 814]. In contrast, Tom Regan, a key advocate of animal rights, describes all attempts to conserve threatened species or ecosystems through destroying individual creatures as “environmental fascism” [1983, 362].

This dispute reveals a fundamental philosophical divergence between the relative value of science-based biotic communities (species or ecosystems) and that of individual creatures, leading to an irresolvable chasm between those who advocate a science-based conservation approach (if necessary through culling ‘pests’ or over-abundant species) and those who advocate animal rights at the individual level.

It is important to register that this is a modern question. The notion of individual ‘rights’ (animal or human) is not addressed directly by the Hebrew scriptures or New Testament [Novak 1996], which instead speak of ‘worth’ and ‘duties’. Biblically, value resides not so much in individual rights as in relationship with a God who creates and values, and derivatively in humanity’s reflection of God’s character of justice, mercy and compassion. Whilst many trace contemporary notions of human and animal rights to Judaeo-Christian concepts [Wolterstorff

2011], biblical ‘worth’ always arises in the context of God’s active relationship with his creatures, rather than through post-Enlightenment “reductions made on the basis of abstract notions of equality, freedom or justice” [Marshall 2002, 118]. The more theologically astute amongst animal rights advocates recognise this. Linzey speaks of ‘theos-rights’ embedded in individual creatures’ relationship with God, stating, “it is therefore God’s rights in creation that are protected by animal rights” [1987, 55].

There is a complex hermeneutical task in applying ancient biblical texts to this contemporary debate, in which the horizons and contexts of authors, redactors, interpreters and questioners need to be held in creative tension. As with many arguments, those on both sides who seek ‘proof texts’ will find them. To take some obvious examples, Christ’s words concerning the value of a single sparrow to God (Matthew 10:29, Luke 12:6) may be used to support individual animal rights [Hall, undated, 7-8], whereas Old Testament injunctions permitting cruelty to animals (eg. Joshua 11:6 where God commands enemy horses to be hamstringed) are quoted by advocates of hunting and trapping [Vantassel 2009, 61]. In both these cases, context is critical. Christ’s words on the value of sparrows are qualified by his accompanying statement that humans are worth more than many sparrows. The command to Joshua is in the context, firstly, of war and, secondly, of an Old Testament purity code where cruelty to both humans and animals was sometimes allowed (Deuteronomy 13:12-15; 1 Samuel 15:2-3), and is clearly alien to New Testament ethics. Taking the biblical witness as a whole, we will see that God is concerned both with individual creatures and with the continuance of ‘kinds’ of creatures (the nearest equivalent to the modern species concept).

The Genesis creation accounts reflect God’s interest in both ‘kinds’ and individuals. In the first, carefully structured, account, the phrase “according to its / their kind” appears seven times in vv.21-24, suggesting the Creator’s intent to affirm what we might today call speciation and biodiversity. It is significant that it is the totality of creatures of every ‘kind’ that God proclaims ‘very good’ (1:31), implying that a plenitude of species and an abundance of diversity are what God delights in most. Similarly, in the second Genesis account, Adam is invited to name the creatures, suggesting a proto-scientific taxonomic approach to understanding the unique qualities of different kinds of creature.

However, there are also hints that individual creatures matter too. When Adam seeks a companion from amongst other animals (2:16-20), whilst ultimately “no suitable helper was found”, the very possibility of close friendship between humans and individual living creatures

is suggestive. Perhaps there are echoes of this passage in the extraordinary Joban accounts of God's deep relational knowledge of and delight in wild creatures (39-41). Unlike human beings, God is able to understand and delight in wild and even dangerous animals. Leviathan and Behemoth, in particular, are not generic 'kinds' of animals but individuals, described with detail and personality. God teases Job, reminding him that Behemoth was created by God "along with you" (40:15) and is ranked "first amongst the works of God" (40:19), a position humans conventionally claim for themselves. Similarly, Leviathan cannot be tamed but is celebrated by God for its "strength and graceful form" (41:12) and how it "looks down on all that are haughty" (41:34), again putting humanity in its place.

Returning to Genesis, whilst being created in God's image (1:26-28) implies distinction from other animals, in contrast being created alongside other mammals (1:24-26), being made from dust (2:7), sharing living breath with other creatures (2:19), and seeking a companion from wild animals all imply value for individual creatures in their relational potential. Thus, the Genesis accounts should not be used to defend either a conventional conservationist or animal rights position but necessitate an alternative framework for valuing nature.

Moving to the Noachic flood and covenant, we find again that the account challenges modern polarities. On the one hand, there is a clear 'conservationist' motif in rescuing representative breeding pairs of species. With its focus on species survival, Genesis 7-9 gives a strong theological rebuttal to those animal rights advocates who oppose human interference in natural systems in order to protect endangered species, because of the risk of suffering to individual creatures. Linzey, for instance, questions efforts to protect species threatened with extinction, stating: "From the stand-point of theos-rights, it makes some difference but not much whether it is the very last tiger, or one of many thousands, that is gratuitously killed" [1987, 109]. However, Noah's divine vocation to rescue representatives of every 'kind' of creature suggest Linzey is placing individual animal rights above the divine desire to preserve every type of species.

Yet, the Noachic covenant incorporates not only 'kinds' but individuals. It is a covenant with "every living creature" (repeated five times in Genesis 9:9-16) and "all life on earth" (9:17). It should thus be seen as similar to the Psalmist's sense of God's provision for and compassion towards every living creature (Psalm 104:10-18, 27-28; Psalm 145:8-9, 15-16).

It is also in a postdiluvian world that the killing of animals both for meat and in the sacrificial system are introduced with divine sanction. The key theological question is whether animal death and carnivorousness are entirely the consequences of sin and a cosmic fall, or whether the evolutionary process, with its inevitable predation and death, should be recognised as God-given. Based on Genesis' description of a prelapsarian vegetarian world and eschatological biblical visions of a non-violent future, Clough argues that "relationships of predation ... are not original or final indications of God's creative and redemptive will" [2012, 121]. This presents an obvious challenge in terms of the fossil record and paleo-ecological findings, which clearly show predation and death predating humanity's arrival. Rogerson suggests, therefore, that Genesis 1's vision of a vegetarian world is less a historical claim and more a prophetic vision fulfilled eschatologically: "a challenge to create a human society that will be capable of living in a world that is the kind of world that God intends" [2010, 29].

For the purposes of this thesis it is not necessary to be categorical about whether or not the inevitable suffering in evolution is part of God's original purpose in creation, as long as we recognise the eschatological affirmation that God's final plan is one where every creature is released from the bondage of suffering and death. The implication with regard to animal suffering in all its contexts (in the evolutionary process, the sacrificial system, and in human interventions in nature), is to recognise that suffering may be inevitable in the current order, but should be minimised and avoided where possible in the light of eschatological hope.

In addition, whilst speaking of 'rights' for individual creatures in the context of the Old Testament sacrificial system is anachronistic, yet Leviticus and Deuteronomy clearly show animal life as precious before God through careful proscriptions, demonstrating that the taking of life, is a solemn and serious act only permissible within the cultic context [Douglas 1999; Millgrom 2004].

In the New Testament, the value of human and animal life is reinterpreted Christocentrically . All creation finds its fulness (*plérōma*) and destiny (*telos*) in Christ, (Colossians 1:16, 19). His incarnation as *sarx*, animal flesh (John 1:14), affirms the value and redemptive inclusion of both human and animal bodies. In imagery that is profoundly ecological in its relational interdependence, Christ provides coherence between each part of creation both currently ("in him all things hold together" Colossians 1:17) and eschatologically ("to bring unity to all things in heaven and on earth under Christ Jesus" Ephesians 1:10). This Christocentric identity unites humanity and all other creatures, implying the value both of individual creatures and ecological

categories such as species, again suggesting that the modern dilemma is largely a result of secular post-Enlightenment categorisation.

Christ's words and actions in the Gospels are in continuity with Hebrew Wisdom's immersion in the natural world. A careful re-reading of Christ's teaching on sparrows (Matthew 10:29-31) suggests that neither animal rights activists nor conservationists should claim the text to justify their views. On the one hand, individual sparrows clearly matter to God, and Jesus' recognition of them is culturally remarkable. The implication is that conservation must account for suffering caused to individual creatures, even 'pest' species. If God cares about individual sparrows, he surely cares about feral rats, cats, pigeons and pigs, exterminated in large numbers as part of conservation attempts to remove 'alien' species. On the other hand, "you are worth more than many sparrows", whilst implying sparrows have individual value, relativises their value in comparison to human beings, undermining those contemporary animal advocates who suggest all creatures have equal moral interests. Where decisions have to be made, human interests are clearly favoured over those of sparrows whilst, in the light of God's compassion for all living creatures, solutions should be sought which minimise any animal suffering.

In summary, the biblical witness refuses to separate the value of individual creatures and that of species and ecosystems. All of God's creation, both individually and in its diversity, is to be treated with compassion. In the light of the Noachic account, anthropogenic extinctions disrupt God's good plans and conservationists should take action to protect endangered species and habitats, even when such action may necessitate removing 'alien introductions'. However, methods of removal or culling which minimise suffering should always be sought. The use of inhumane 'scientific methods' to justify cruelty is implicitly condemned by God's compassion for all living creatures (Psalm 145:9). Thus, a philosophy of nature needs to be articulated which incorporates the value both of ecosystems and species, and also of individual creatures.

The biblical witness stands in judgment upon contemporary notions of both individual animal 'rights' and dispassionate science-based conservation, exposing them as fruits of the intellectual fragmentation of post-Enlightenment western thought. The biblical vision neither dismisses the inevitable suffering within evolutionary biology as unimportant, nor justifies it as part of a greater good. All creatures matter, not just those that are 'evolutionarily distinct or globally endangered' [ZSL 2007], but also those that are more 'primitive', more numerous, or do not appear to occupy a significant ecological niche. What gives them value is not their place in an

evolutionary tree or their function in an ecosystem [Bolger 2001; Laureto et al. 2015], but their value before God [Bauckham 2015, 47].

Similarly, whilst individual creatures matter before God, their suffering is not the primary concern in a theo-eco-centric universe standing in need of redemption. The biblical legitimation of meat-eating and animal sacrifice, and the suffering which falls upon wild creatures and sinful humans alike, from the Noachic flood to the bowls of God's wrath in Revelation, are all reminders that we live in a world under judgment. Yet, in relation to God's eschatological purposes, death and suffering do not have the final word. Orthodox theology proclaims, "Proper human interaction with the nonhuman creation is defined not by what is, but rather what will be, eschatologically" [McLaughlin 2014, 67]. Thus, whilst suffering, predation and death may be inevitable, they are not desirable. Christians involved in wildlife conservation should seek to anticipate the coming Kingdom by minimising animal suffering. If Moltmann is correct that "If we were to surrender hope for as much as one single creature, for us God would not be God" [1996, 132], then, to quote McLaughlin again, "Proleptic protest, not mere preservation, is the mantra of transfiguration" [2014, 67].

For Christians, there needs to be a recognition that both conservation biologists and animal rights groups are seeking the welfare of God's creation, but that both have a myopic tendency to overlook, in one case the suffering of individual creatures, and in the other the importance of ecosystem flourishing and species diversity. All of these matter to God and the challenge is to have a worldview broad enough, and a decision-making process inclusive enough, to take all these factors into account.

3. Can and should we put an economic price on nature?

The debate around Ecosystem Services (ES) and its offshoots, such as The Economics of Ecosystems and Biodiversity (TEEB), Natural Capital, and Biodiversity Offsetting was introduced in the opening chapter of this thesis. There is a massive literature around this debate, with numerous critiques and defences of ES and attempts to redefine it more broadly [Schröter et al. 2014], but reflection here will be limited to issues raised in the light of the theological chapters of this thesis.

From the perspective of biblical theology, the clearest critique of ES relates to its anthropocentrism. Michael Banner summarises the debate as "dominated by the question as to

whether we should value the environment for the sake of human interests alone, or for the sake of the environment itself” [1999, 164]. One of the most widely-accepted definitions of ES describes it as “the delivery, provision, production, protection or maintenance of a set of goods and services that people perceive to be important” [Chee 2004, 549]. In this understanding, ES is an anthropocentric, utilitarian belief that nature’s primary purpose is to aid human flourishing. In contrast, each of the four major theological themes analysed in this thesis have demonstrated that, from the perspective of creation, covenant, Christ’s work in redemption, and God’s eschatological purposes, the *telos* of the whole creation is neither anthropocentric nor ecocentric, but theocentric.

Regarding creation (*originalis* and *continua*), the earth and its creatures belong to God rather than humanity (Psalm 24:1-2), and possess an integrity and importance of their own, independent of their usefulness to humanity. The wisdom writings, particularly Job 38-41, reveal the assumption that nature serves human interests alone to be misplaced and hubristic. Creatures are born, live, and die, cared for by God and without reference to their valuation by humanity. Consequently, as Bauckham writes, “As creatures of God, the creatures are literally priceless, and we degrade them by putting a price on them” [2011, 232]. Furthermore, from Noah onwards, wild creatures are included as parties within God’s covenant purposes (Genesis 9:1-17), and humanity’s relationship with God is located in a network of covenantal interdependence incorporating domestic and wild creatures.

The New Testament frames these theological insights in a cosmically Christocentric worldview, wherein all creatures, human and nonhuman, are made through and for Christ, find their coherence in him and are incorporated in God’s reconciling purposes through Christ’s cross (Colossians 1:16-20). Finally, God’s purposes in consummation are “to restore everything” (Acts 3:21), so that the whole creation will be “liberated from its bondage to decay” (Romans 8:21).

At no point does biblical theology indicate God’s plans to be ontologically anthropocentric, or creation’s redemption to be instrumentally for human benefit. Rather, passages suggesting humanity’s centrality in God’s saving purposes are concerned, firstly, with human culpability for disrupting God’s good plans and, secondly, with a vocation to reflect God’s character in compassionate service towards nonhuman creation (Genesis 1:26-28, 2:15).

Whilst most contemporary conservationists would not identify with the biblical theology described here, many are equally unhappy with an ES approach based on a “utilitarian, anthropocentric and instrumentalist ethical framework” [Chee 2004, 551]. The UN Convention on Biological Diversity recognises “the intrinsic value of biodiversity” alongside anthropocentric values [United Nations 1992, 1]. Neither scientifically-trained conservation biologists, nor the millions of amateur naturalists, dedicate their efforts to protect wildlife and ecosystems for utilitarian reasons alone. Rather, most recognise a deep sense of wild nature’s inherent worth. The double Pulitzer Prize-winning biologist, E. O. Wilson, describes this sense as “Biophilia”, defined as humanity’s “innate tendency to focus on life and lifelike processes” [1984, 1]. Others have written of Conservation Biology as “mission-driven science” [Soulé and Wilcox 1980; Gosler et al. 2013, 92], indicating an ideological debt to the biblical formation of many early naturalists and proto-conservationists, from John Ray and Gilbert White to Carl Linnaeus and John Muir [Bookless 2018].

Although anthropocentric motivations may lead to nature conservation, because of its utility to current and future generations, and appreciation of its beauty [Banner 2009, 183], they are ultimately inadequate in ensuring the integrity of biodiversity and ecosystems. Ecosystems valued for specific services benefitting humanity may not adequately preserve biodiversity. Adams points out that, “management aimed at providing valuable services may lead to support for artificial or novel ecosystems, non-native species, and organisms shaped by synthetic biology” [2014, 550]. Anthropocentrically, human needs are inevitably prioritised, and if species or habitats are destroyed consequently, the damage cannot be undone.

A well-researched example illustrates the problem. The Nile Perch, a nutritious, fast-breeding but alien fish species, was introduced into Lake Victoria, to the initial delight of local communities. However, as often occurs with introduced species, there were devastating effects on indigenous fish species, leading to ecosystem collapse and the local or total extinction of over 200 species of cichlid fish. A narrow and short-term anthropocentrism failed to give appropriate value to a fragile and complex ecosystem, causing irreversible extinctions [Ogutu-Ohwayo 1990].

Some versions of ES attempt to overcome narrow utilitarian valuations of nature by measuring not only nature’s ‘provisioning’ (food, water, medicines), ‘regulating’ (pollination, climate, removal of pollutants) and ‘supporting’ services (soil formation, photosynthesis, nutrient cycling), but also a catch-all category of ‘cultural services’ comprising cultural, aesthetic, and

spiritual services [TEEB 2010, 7]. Yet, this itself causes methodological and philosophical problems. As an article in *Environmental Values* points out, “An attempt to represent people’s valuations of the environment in the same terms as their valuations of ordinary market goods would be a simple category mistake” [Beckerman and Pasek 1997, 69].

Heidegger’s concept of embodied human existence as “Being-in-the-world” [1962, 12:84], suggests that ‘value’ is too limited a category to account for the complexity of positive and negative modes of relating to nature, including grief, love and wonder. Heidegger characterises modernity as progressively technocentric and functional, valuing in a unidimensional, calculative way which fails to give worth to aesthetic, moral and religious dimensions of perception. Simon James argues that Heidegger “would have reserved a special distaste for talk of environmental values” [2009, 79], particularly the notion that non-utilitarian values can be monetised and made commensurate with ‘resource’ usage values.

Advocates of ES argue that non-utilitarian values fail to persuade decision-makers such as economists, politicians and business leaders. However, proponents of intrinsic value respond that anthropocentric justifications are, in the words of environmental ethicist Holmes Rolston III, “submoral and fundamentally exploitative, even if subtly” [1995, 62]. Theologian and ethicist Michael Banner agrees, drawing the instructive parallel with the anti-slavery movement, where utilitarian arguments ignored the real issue, that slavery, like “certain ways of treating the environment”, was wrong *per se* [1999, 172].

The weight of biblical evidence supports this conclusion. Seeing fellow creatures as important only for their benefit to humanity is a form of arrogance, inviting God’s question to Job: “Who is this that obscures my plans with words without knowledge? ... Where were you when I laid the earth’s foundation? Tell me, if you understand” (Job 38:2-4). A recent paper in *Biological Conservation* seems to agree, stating that the current era of nature’s destruction “ought to be characterized not by even further distending human hubris, but by humility and respect” [Batavia and Nelson 2017, 374].

If the anthropocentrism of Ecosystem Services causes moral and theological concerns, its tendency towards monetisation causes even more. Those in favour argue that putting a price on “what nature does for us” brings biodiversity into economic and political calculations [Juniper 2013]. A pioneering 1997 paper valued global ecosystem services at \$33 trillion per year, and the same lead authors issued a revised estimate of \$125 trillion for 2011 [Costanza et al. 1997,

2014]. The authors warn that such eye-watering valuations should not automatically lead to a commodification of nature and that “conventional markets are often not the best institutional frameworks to manage” natural resources [Costanza 2014, 152]. Yet, many conservation bodies, national governments (such as the UK’s National Capital Committee) and international agencies [IUCN 2016 (ii)] have done exactly this. UNEP’s founding Executive Director asserted, “In addressing the challenge of achieving global sustainability, we must apply the basic principles of business. This means running ‘Earth Incorporated’ with a depreciation, amortization and maintenance account” [Strong 1996].

However, the propensity of ES to define nature’s value in financial terms also has many critics in the conservation world [Spash 2011, 2015]. Silvertown [2015] traces a worrying movement from the abstract concept of ecosystems, to their commodification in ES (1980s), their monetization within economic systems (1990s), and their marketisation (2000s) through emissions trading, carbon credits and markets in wildlife. He argues that each of these stages represent choices to which there are alternatives, such as protecting nature from market forces [ibid, 642]. The dangers of subjecting nature to monetization and market forces are illustrated in an article in *Nature* by McCauley, who describes a Costa Rican coffee plantation pollinated by bees from a neighbouring forest, thus valuing the bees and forest highly for their ecosystem service. However, a shift in global coffee prices led to planting pineapples, which do not require apian pollination, making both bees and forest suddenly ‘value-less’. The absurdity of this is well observed by McCauley who writes, “To make ecosystem services the foundation of our conservation strategies is to imply - intentionally or otherwise — that nature is only worth conserving when it is, or can be made, profitable. The risk in advocating this position is that we might be taken at our word” [2006, 28].

A more recent, yet similar, example concerns the campaign to protect the Atewa Forest in Ghana,²⁰ described by E. O. Wilson as “the finest example of ...Upland Evergreen Forest” [2016, 138]. Led by faith-based conservation charity A Rocha Ghana (which advocates the intrinsic value and irreplaceability of the wildlife and habitats Atewa contains), the imminent threat of large-scale bauxite mining for aluminium production has been resisted by resorting to an anthropocentric ES argument based on Atewa’s provision of clean water for businesses and 5 million people.²¹ Although this initially carried weight with decision-makers, a recent counter-proposal involving massive Chinese investment in exchange for mining rights, argues

²⁰ <http://www.saveatiwa.com.gh>

²¹ <http://ghana.arocha.org/resources/atewa-national-park-why-the-campaign>

for protecting only the southern part of the forest (where most of the water sources are) but allowing open-cast bauxite mining in the northern part, where much of the most threatened and unique wildlife is located. By using an anthropocentric ES approach, rather than focussing unashamedly on the intrinsic value of the wildlife and ecosystem, there is a danger that those parts of Atewa that matter most for biodiversity will be lost. McCauley's warning about being "taken at our word" by placing ES at the heart of a conservation strategy appear prophetic.

Ecosystem Services tend to reduce incommensurate values to a single, usually monetary, scale ignoring the multidimensional nature of the term. 'Values' may be used economically, ethically or numerically, with important differences [Gunton 2016, 251]. It may apply to preference-based utilitarian valuation (something is more or less valuable than something else), to principle-based, non-negotiable deontological ideals (such as that species should never be allowed to become extinct), and to virtue-based values that pertain to the actor (such as that greed or cruelty damage those who commit them) [Chan et al. 2012]. To ask somebody how much they are prepared to pay to preserve a species or landscape may be a category error if the way they value those things is tied to their sense of identity in terms of culture, history, spirituality and beliefs. Decision-makers therefore "ignore principles and virtues at their peril" [ibid, 11] because they are key to the incommensurability problems within an ES approach.

The clergyman and natural philosopher Nigel Cooper likewise argues that 'aesthetic' and 'spiritual' values do not belong in an instrumentalist valuation system since they are based on shared relational or constitutive values and duties, not individual preferences: "These non-instrumental values do not lie in the domain of economics" [2016, 225]. For those who value nature 'spiritually' or speak of connection, wonder or humility in the presence of nature, "to reduce the rest of nature to the status of a resource feels a sacrilege in the face of such awe" [ibid, 223].

A recent paper, to which the author of this thesis contributed [Gunton et al. 2017], recognises the multivalent nature of 'value' and offers a possible alternative to the incommensurability of the values incorporated in ES. Gunton states, "What is needed is a framework that consistently distinguishes ecological processes from human modes of appreciating them. A proper treatment should be intrinsically multidimensional and recognise mutual human-environment relationships" [ibid, 253]. Using 'Aspectual Theory' (pioneered by Dutch reformational philosopher Herman Dooyeweerd [1955]), which posits irreducibly distinct modes of functioning and being, the paper offers an Ecosystem Valuing Framework (EVS) with 12 axes

allowing for a variety of modes of valuation that incorporate economic, ecological, social, cultural, aesthetic and spiritual values. This EVS model recognises values-based decisions about specific ecosystems and places must necessarily be context-specific and involve a range of stakeholders ranging from biologists and economists to local communities. It is also fundamentally both integrative and relational in its approach to valuation, moving the focus “from commodities to relationships between specific stakeholders and places” [ibid, 250].

EVS is an improvement on ES because it recognises multiple axes of valuation, not of all of which are commensurate, thus exposing the reductionism of ES approaches, particularly those dominated by economic valuations of nature. EVS attempts to allow both for the inclusion of deontologically derived values and for a virtue ethics-based approach, but ultimately it does so within a framework that remains anthropocentric, and which subsumes other forms of valuation within a consequentialist paradigm.

Another recent article moves beyond the polarity of instrumental versus intrinsic values by recognising that valuing is essentially relational: “Relational values are not present in things but derivative of relationships and responsibilities to them” [Chan et al. 2016, 1462]. The article argues faith-based values are largely relational, specifically noting the Papal Encyclical *Laudato ‘si: On care for our common home* [Francis 2015], and concludes “Environmental policy and management should always consider the kinds of relationships people already have with nature, and how these might be engaged to lessen the negative effects of human lifestyles on ecosystems and enhance positive ones” [Chan et al. 2016, 1464].

There is further correlation between Gunton’s and Chan’s relational approaches and James’ Heideggerian critique of environmental values. James writes of needing “to work with a rich conceptual palette” to capture “the rich variety of ways that nature matters to us” [2009, 86], and of the necessity of a pluralist approach to encompass the complex relationships between humans and the natural world. He refers to Thoreau and Muir, suggesting humans *need* wild nature, arguing this goes deeper than values, and quoting Aldo Leopold’s proposal that wild creatures can only be valued in relationship with the rest of their ecosystem.

From a biblical theological perspective, reducing the value of creatures God cares for, and ecosystems made for Christ, to monetary valuations subject to market fluctuations and human preferences is ultimately idolatrous (Matthew 6:24). Whilst, in a world dominated by market economics, ES allows nature to be included in economic calculations rather than excluded as

an externality, yet the constant biblical emphasis is that value is found in relationships rather than in things themselves.

The conflation of an entity's price and its value is not only a philosophical error but a moral one, since value consists in relationship to a valuer, ultimately God. The living creatures of every kind included in the ark of salvation were not there because Noah valued them, nor because of some intrinsic value they possessed, but simply because God wished them to be preserved. The biblical witness, therefore, is that wild nature's value is neither derived from anthropocentrically utilitarian nor deontologically ecocentric sources, but is theocentrically contingent, in that it is conferred ultimately in relationship with God, and derivatively within the web of relationships between human beings and the rest of nature in specific local contexts. This calls for a transformative ecological anthropology, which simultaneously focusses inwardly on developing character that will bear fruit in wisdom and virtue, and outwardly in an ethical orientation that is theo-eco-centric, focussed on the worship of God and the well-being of human and nonhuman creatures.

4. What is an appropriate ecological anthropology?

History reveals a spectrum of Christian responses to the question of an appropriate ecological anthropology. At one extreme stand ideas of dominion, mastery [Vantassel 2009], and despotism, illustrated by Francis Bacon's (1561-1626) call to make Nature a "slave" [1966, 62]. At the other extreme lies an emphasis on human communion with wild nature, exemplified by St Francis of Assisi (c.1181-226). Between these poles, the majority Christian tradition has spoken of 'stewardship' in terms of *Man's responsibility for nature* [Passmore 1974]. Stewardship places humanity, as 'image of God', in a special relationship both with God and the rest of creation. The term 'stewardship' is elastic in meaning, potentially concealing an anthropocentrism disguised as theocentrism, wherein God allows humanity to 'steward' creation exclusively for human well-being. McLaughlin makes this point well: "If God ... orders the creation such that the nonhuman exists for the human then theocentrism has in fact grounded anthropocentrism within the cosmos" [2014, 63-64].

Stewardship as a descriptor of ecological anthropology has been critiqued extensively (see chapter 5), for being an unbiblical term in relation to human responsibility for nature [Horrell et al. 2010, 6], for making God an "absentee landlord" [Palmer 2006, 68], for fostering a feudal, exploitative relationship with nonhuman creation [ibid, 69], for inaccurately implying nature

requires human management [ibid 71], and for being “too freighted with the baggage of the modern project of technological domination of nature” [Bauckham 2011, 62].

Cumulatively, these criticisms are significant. In stewardship’s defence, Christ redefines the term in a way that is teleologically non-anthropocentric through his stewardship parables. Whilst these are not explicitly ecological, the themes of ‘holding in trust’ and ‘answerability to God’ implicitly apply to creation care. Similarly, as argued earlier, New Testament pneumatology overcomes the ‘absentee landlord’ critique since creation care is God’s work through his people.

Frances Young has sought to recapture how stewardship was understood by the early church fathers, arguing that current exploitative interpretations stem from reading “the fathers in the light of colonialism, capitalism and the pursuit of ever-expanding economic growth” [2013, 137]. She argues the Early Church saw humanity as “God’s representative or co-worker ... contributing to the process of change and renewal” [ibid, 87]. Yet, Young also acknowledges that, “the fathers understood humanity to be in a kingly position in relation to the rest of the created order ... the conventional model was a somewhat paternalistic philosopher-king” [ibid,137].

Overall, whilst it is possible to redeem ‘stewardship’ as leadership from amongst rather than above [Attfield 1983], its hierarchical history and exploitative contemporary associations make it unhelpful in articulating ecological anthropology. Although biblical royal imagery may imply self-giving service on behalf of the other, its connotations of abusive power correlate too closely with humanity’s destructive relationship with nature. The writer Richard Mabey suggests, “Perhaps it behoves us ... to see ourselves not so much as managers or even stewards of the natural world, but as fellow-creatures” [1993, ix].

The most unhelpful connotation of stewardship is the gulf it creates between humanity and other creatures. Biblically, ‘image of God’ as a descriptor of human and ecological anthropology is extremely rare in scripture [Middleton 2005, 144], and disguises the fundamentally relational nature of the Genesis narratives. The biblical narratives as a whole balance humanity’s distinctiveness with its membership of the community of creation. Humans are called apart within, not above, nature.

Biblical anthropology is thus fundamentally an ecological anthropology, since humans are created within a network of relationships to God, fellow creatures, and the earth from which they are formed. Being human is impossible in the abstract, but occurs in embodied material form within an ecology of relationships. Creation in the image of God is not an ontological differentiator from the rest of creation but a vocation to represent God's character and give leadership within nature.

Biblical ecological anthropology, therefore, is not simply about 'people and nature' [Mace 2014], and goes further even than the ecological image of 'people *within* nature' to suggest a vocational relationship: 'people *for* nature'. Cooper expresses this well: "value lies in the flourishing of the other, rather than in their value to me" [2016, 223]. Kelsey's definition of theological anthropology as *Eccentric Existence* [2009] also reflects this fundamentally heterocentric orientation, a calling to serve and preserve 'the other', both human and nonhuman, within God's creation. Thus, to reflect God's image and 'tend and keep' the garden (Genesis 2:15), may legitimately be seen, in the light of Christ's Kingship expressed as service (Luke 22:27; John 13:1-17), as a vocation towards sacrificial servant-hearted compassion and love towards the whole of God's creation. As Bouma-Prediger states, "we are to serve and protect the garden that is creation – literally be a slave to the earth for its own good, as well as for our benefit" [2001, 74].

To display the *imago Dei*, humanity must reflect the centrifugal love spinning outwards from the heart of the Trinity, expressed in the creation of a biodiverse world, in covenants that bind God, humanity and the rest of nature together, in self-giving redemption of the cosmos, and in eschatological hope for the renewal and restoration of all creatures and the whole creation. Humanity's vocation to reflect the *imago Dei* towards wild nature (Genesis 1:28) is analogous to Israel's calling to be a "light to the nations" (Isaiah 49:6). It involves God's sovereign choice despite humanity's otherwise cosmic insignificance (Psalm 8:3-8), similar to God's choice of Israel despite their being less numerous and powerful than other nations (Deuteronomy 7:7-9).

The New Testament sheds further light on ecological anthropology in Christ's incarnation as *sarx* rather than *ánthrōpos* (John 1:14), reinforcing God's valuation of all 'flesh' and humanity's embodiment within animal creation. If humans, like the incarnate Christ, are animal-kind first, and humankind second, then anthropology is subsidiary to ecology. Our primary belonging is within the animal kingdom and our humanity is secondary. We are firstly creatures, and secondly human creatures.

Furthermore, Christ as the new Adam (Romans 12:21) and the fullness of God's image (Colossians 1:15) necessitates reinterpreting *imago Dei* and ecological anthropology Christocentrically. The New Testament gives suggestive pointers, though little detail, in passages such as Romans 8:21 where creation's future liberation is tied to "the freedom and glory of the children of God". This passage implicitly recasts the Genesis creation mandate as the task of the Church, the 'children of God', demonstrating that a Christocentric ecological anthropology is communal, not individual, and is specifically ecclesial.

It is the role of the Church as Christ's body on earth to proclaim the Lordship of Christ over the whole creation, both in word and deed (Mark 16:15; Colossians 1:18-20). This is not an optional extra for an environmentally-minded minority, but core to the Church's purpose, doxologically and missiologically. The Anglican Communion's inclusion of striving "to safeguard the integrity of creation, and sustain and renew the life of the earth" within its *Five Marks of Mission* [Coleman 1990, 101] is therefore theologically important. If the *missio Dei* includes the whole created order, then the *missio Ecclesia* must necessarily include seeking the well-being of wild nature and the flourishing of all creation.

The final biblical perspective on ecological anthropology lies in the cosmic vision of creation's transformation and ultimate consummation in Christ, illustrated both in prophetic Hebrew visions of *shalom* and in apocalyptic glimpses of new creation. Redeemed humanity's place in the new creation is primarily to worship Christ, the enthroned Lamb of God, alongside "every creature in heaven and on earth and under the earth and on the sea, and all that is in them" (Revelation 5:3). Although royal and priestly imagery are used of redeemed humanity (5:10), Bauckham argues against overplaying them: "Our human responsibility in this respect is not, as some argue, to voice creation's praise for it or to mediate its praise to God, but to let it be itself. Humans and other creatures are made to be partners in praise, like the four living creatures" [2011, 184].

Overall, a canonical approach to ecological anthropology combines humanity's place both as one of God's creatures, contingent and profoundly interdependent, and also as uniquely called apart to a particular role within creation. This vocation is explicitly focussed on responsibility for the welfare of other living creatures. Whilst royal and sacerdotal imagery is often used, and 'stewardship' has been adopted to describe this role, our contemporary context of humanity's hubristic and destructive relationship with nature makes such imagery potentially misleading.

It is more helpful to use equally biblical language of gardening (serving and preserving; Genesis 2:15), and shepherding (pastoral care; Psalm 23; John 10).

The biblical ecological anthropology explored here evokes certain virtues in relation to humanity's place within nature. In classical ethical theory, virtue ethics differ from deontological and consequentialist ethics in focussing on the formation of character, and on motivation as much as action [Hursthouse, 2002]. Of course, all three ethical systems regard virtues as important, but virtue ethics recognise that the complexity of moral choices in the real world necessitates practical contextual wisdom that cannot be derived solely from deontological absolutes or utilitarian calculations. In relation to current ecological crises, it has been proposed by a number of authors that environmental virtue ethics may provide a more fruitful way of changing humanity's harmful relationship with nature than deontological or utilitarian approaches [Hursthouse 2007; Sandler and Cafaro 2005].

As we have seen, biblical ethics can be construed as utilitarian insofar as biblical wisdom is sensitive to context and conditions and Christ's 'Golden Rule' to "do to others what you would have them do to you" (Matthew 7:12) is basically consequentialist. More fundamentally, biblical ethics are deontological, since they theocentrically derive from God's ascription of absolute inherent value to creation. However, the biblical wisdom tradition, predating ancient classical virtue ethics, exemplifies a virtue-based approach founded on relationships with God, other people and the natural world [Crenshaw 1969, 132]. Moreover, in the Gospels, Christ reinterprets the commandments away from simple obedience to moral absolutes, towards an internal transformation of character, foreseen by Jeremiah's prophecy: "I will put my law within them, and I will write it on their hearts" (31:33). In the Beatitudes and the Sermon on the Mount (Matthew 5-7), Jesus encourages a radical transformation of attitudes and motivation. New Testament pneumatology takes this further, in terms of becoming more like Christ through the Spirit's work in the believer.

Ultimately, it is impossible precisely to align biblical understandings of ethical behaviour, and thereby of ecological anthropological orientation, with a singular classical ethical theory. However, in the light of God's distinctive initiatives towards creation and their implications for ecological anthropology, this thesis has argued that a fundamental heterocentric (or eccentric) reorientation of character and priorities is required. This can variously be described as conforming to the *imago Dei*, as 'remaining in' or becoming more like Christ (John 15; Romans 12:2; Galatians 2:20), and as being transformed by the Holy Spirit (2 Corinthians 3:18). The

consequence of such a reorientation is to be expressed in virtuous behaviour towards all that God has made, human and nonhuman, specifically including conserving and serving wild nature.

Earlier in this thesis, such ethical virtues as delight, wonder, humility, fellow-feeling and respect were discerned in relation to the Hebrew Wisdom tradition and humanity's place within the natural world. This section concludes by looking at New Testament ecological virtues, through the lens of the 'fruit of the Spirit' described in Galatians 5:22-23, in dialogue with the four 'cardinal' and three 'theological' virtues, respectively: prudence (or wisdom), fortitude, temperance, justice [Plato 427e; Ambrose V. 62], and faith, hope and love (Aquinas II-I, 55-62; 1 Corinthians 13). Whilst the Pauline context of Galatians 5 relates to human relationships, by extension God's Spirit nurtures similar attitudes toward every part of creation. If God "has compassion on all he has made" (Psalm 145:9), there should be continuity between how we treat fellow humans and fellow creatures.

Love: To love God and neighbour is the greatest commandment (Matthew 22:37-40), and the starting point for all virtue (as recognised by love (charity) being the greatest of the theological virtues). Loving God means loving fellow creatures who exist to give God glory. Loving neighbours includes preserving the biodiversity which enables all life to flourish. Seeking to prioritise between human thriving and nature's wellbeing is to succumb to a false dichotomy, because God's love celebrates all that he makes "very good" (Genesis 1:31), and incorporates all living creatures in the ark and ensuing covenant. If conservationists are to use economic valuations of nature to assist their cause, they need to emphasise that it is love for creation (*Biophilia* [Wilson 1984]) which makes nature's monetary value inestimable, and binds humanity in interdependence with all other creatures within God's providence and provision.

Joy: Delight in the beauty, mystery and otherness of fellow creatures is fundamental to being human and engenders a response of joyfulness. As Job discovered, joy in wild nature stems from immersion in nature's otherness and diversity, and contemplation of its beauty, fragility and interdependence. Proverbs 8:30-31 describes Wisdom as, "filled with delight day after day ... rejoicing in his whole world and delighting in mankind." Hugo Rahner writes, "When ... we speak of God the Creator 'playing', there lies concealed in that phrase the metaphysical truth that the creation of the world and of man ... was by no means a necessary one as far as God himself was concerned" [1972,11]. This is not the distant Deist watchmaker God, but a personal, relational being, delighting in joyful creativity. In this context, the 'fear of the Lord'

is a doxological response of creative play from the creature toward the creator. In a world of wounds and despair, joy is no escapist emotion, but the response of faith to the conviction that God's goodness will prevail. As Wendell Berry sagely urges, "Be joyful, though you have considered all the facts" [1971, 15].

Peace: The eschatological visions of Isaiah 11:6-9, 65:17-25 and Hosea 2:16-23 describe nonhuman creatures living in harmony with human beings in a vision of *shalom* – God's peaceable Kingdom. Peacemaking is characterised by justice, both a classical virtue and biblically central to God's character. Justice involves a passion for putting right what is wrong, restoring broken relationships, and advocating for the voiceless and oppressed. Ecological anthropology involves a ministry of reconciliation as inclusive as the God who, "was reconciling the world to himself in Christ" (2 Corinthians 5:18-19). Peacemakers (Matthew 5:9) often find themselves seeking resolution between those with conflicting values. In conservation terms, peacemaking includes articulating the cries of the voiceless, both wild creatures and human communities whose lives are impacted by conservation decisions, and whose traditional wisdom is sometimes disregarded. Peacemaking seeks to be integrative and inclusive, hearing every side of the story and discerning a harmonious way forward.

Patience: Kelsey writes that true Wisdom deriving from the 'fear of the Lord' invokes three responses: wonder, delight, and perseverance in relation to our fellow creatures [2009, 170]. Similarly, Jesus' call to learn from birds and flowers (Matthew 6:25-34) involves patient observation of nature leading to dependence upon God. Patience suggests faithful, persistent perseverance in particular "proximate contexts" [ibid, 893], consisting of local webs of relationships with human and nonhuman neighbours and the ecosystems that support them and us. It tends towards long-term conservation strategies rather than short-term, funding-driven approaches. It also relates closely to the classical virtue of 'fortitude' or courage in its ability to persevere despite opposition or apparent failure.

Kindness: Abraham Lincoln famously said "I care not much for a man's religion whose dog and cat are not the better for it" [in Preece 2003, 280]. Ecological anthropology necessitates kindness to wild and domesticated creatures, reflecting God's kindness to all creation. Proverbs 27:23-24 states:

"Be sure you know the condition of your flocks,
give careful attention to your herds;

for riches do not endure for ever,
and a crown is not secure for all generations.”

The occasional antipathy between wildlife conservationists and animal advocates may be traceable to divisions between the value of ecosystems and of individual creatures, but God cares for both. Divisions between wild and domesticated, or endangered and ‘invasive’ species should never excuse unnecessary ill-treatment. If God has compassion on all that God has made, that includes the chicken and the cockroach as well as the orangutan or the ocelot.

Goodness: In Galatians 5, ‘kindness’ and ‘goodness’ both translate *chrestotes*. If kindness is the action, goodness is the disposition behind it. Goodness sees the best, and seeks the best, and is thus an essential virtue in conservation contexts where hope is in short supply. Such an attitude flows, firstly, from the belief that everything God has made, including difficult people and damaged habitats, has potential to be ‘very good’, and secondly from a deep-seated hope that positive change is possible. Hope, as a core theological virtue, is based on a positive vision of what is possible but not yet evident. Whereas contemporary conservation suffers from a crisis of hope, as appeals for nature’s protection largely fall on deaf ears, and as some adopt instrumentalist arguments towards valuing nature, Christian hope takes full account of creation’s groaning, allowing for lament and tears as a prelude to the hope that defies human wisdom, the hope that resurrection can come out of death.

Faithfulness: Just as God’s faithfulness to the Noachic covenant gives hope for every living creature, so human faithfulness to God is reflected in how we treat fellow creatures. The root of faithfulness is ‘faith’ (*pistis*), one of the three theological virtues, a gift of God’s grace rather than self-generated, shown in God’s faithfulness to humanity even when his purpose is ignored and his creation abused. Job and his comforters began with a simplistic notion of God’s faithfulness, described by David Ford as, “a well worked out set of responses to suffering, evil, death and other traumas ... ensuring that the good are rewarded and the bad punished” [2007, 123-124]. What Job learned through encountering God in the vastness of wild nature was a much more unpredictable and risky trust in God’s faithfulness. God’s purposes are to be trusted even though they are beyond understanding, and even though they are not centred on human well-being alone. There is a profound humility in this deeper understanding of God’s faithfulness.

Gentleness: Gentleness is intrinsic to the humility derived from awareness that being created in God's image is a vocation to "serve and preserve" (Genesis 2:15), rather than to dominate and exploit. If Christ, "the image of the invisible God" (Colossians 1:15), "did not come to be served, but to serve" (Mark 10:45), then walking gently on God's good earth means avoiding behaviour that damages or destroys other creatures. If the world exists firstly for God in Christ, and secondly for the thriving of all creatures, then over-consumption and greed are incompatible with ecological anthropology. The cardinal virtue closest to gentleness is prudence, which entails the wisdom to take good care of ecosystems and living creatures upon whose wellbeing our own welfare depends. Gentleness is not simply a matter of using natural resources prudently, but recognises the respect and care that are due to all of God's creation.

Self-control: This parallels the classical virtues of temperance, or restrained moderation, and also of prudence / wisdom. Much ecological destruction, from DDT [Storer 1946], to diclofenac [Green et al. 2004], to fossil fuel emissions [Anderson et al. 2016], begins with the unforeseen consequences of well-intentioned innovations. As technologies accelerate, humans must act with greater restraint and wisdom, recognising the value of all species and our accountability to God. Biblical accounts describe divine rhythms and limits within creation. Fields are to have margins for wildlife and the poor. Animals are to share Sabbath rest with humans. Soil needs to be set aside to regenerate one year in seven. Mary Daly-Denton writes: "Much biblical insight, imagery and legislation can be traced back to the observations of farmers ... learning to respect the limitations of the land The biblical witness to this Israelite respect for the land challenges quite a few of the myths we live by today: our notion that the world's resources exist purely for the benefit of humankind; our trust in the 'omnicompetence' of science; our presumption that just because we have the technology to modify natural processes, we have the right to do so" [2017, 3-4]. Bouma-Prediger puts it thus: "Ecologically speaking, foolishness is the disposition to act as if the earth is endlessly exploitable and expendable ... By living only for today, the fool acts as if the future does not matter. He eats the last seed corn" [2001, 150]. The self-control that engenders wise restraint is an essential quality of an ecological anthropology, recognising that just because we can, does not mean we should. The precautionary principle, along with assiduous, independent long-term testing of the ecological impacts of novel technologies are essential if humanity is to use its power wisely.

Conclusion and suggestions for further research

This chapter began with appeals from secular conservation bodies requesting faith communities to participate in the battle to save wild nature. Such cooperation must be based on the principle

that participation is most effective when faith groups speak confidently from the heart of their own tradition, retaining distinctive beliefs but within a posture of respectful listening and constructive collaboration.

This thesis has argued that biblical theology demonstrates four distinctive divine initiatives towards the whole of creation, wherein humanity's role is functionally important but subsumed within a theo-eco-centric worldview seeking the well-being of human society within the flourishing of wild nature. In the light of the New Testament, there is a particular Christocentric ecological orientation, which could potentially be problematic for engaging in partnership with secular and other faith-based worldviews.

However, such dialogue and participation becomes possible because Trinitarian Christian faith proposes, firstly, a universal Creator whose self-revelation is generously accessible to all through studying the natural world (Romans 1:20, Matthew 6:25-34), secondly, a cosmic Christology, expressed in Fiddes' observation, "If there is comprehensiveness in Christ, there is also the spaciousness of wisdom" [2013, 345] and, thirdly, an ecologically-sensitive pneumatology which sees the Holy Spirit sustaining and renewing natural systems and human cultures as well as the Church. Trinitarian Christianity thus welcomes the participation of all those made in God's image, in the shared task of serving and preserving God's world. There will often be times when these theological convictions remain implicit, but they assist Christians in the knowledge that God is at work within and amongst all who care for wild nature.

Biblical Wisdom, in both Old and New Testaments, recognises God's universal self-revelation in nature, and provides a complementary approach to scientific ways of understanding the world. The western theological tradition, from the early modern period onwards, recognised the need for both *sapientia* (wisdom gained from knowledge of God and through the meditative contemplation of nature) and *scientia* (knowledge of the world gained through observation and reason). The philosophical and ethical dilemmas facing the conservation of wild nature today now require a return to both these sources of guidance.

As Fiddes argues, we need both *Seeing the World and Knowing God* [Fiddes 2013], both scientific knowledge and faith-based wisdom. The post-Enlightenment separation between science and faith, and the relegation of the latter to the private sphere [Taylor 2007], impoverished humanity's relationship with nature, leading to its objectification [McGrath 2002]. Science informs us as to whether a particular species of tree frog or orchid is threatened

with extinction but it cannot tell us why that matters, except in the broadest terms regarding its evolutionary place or ecosystemic importance. Science deals in the realm of evidence rather than values, but it is values that will dictate whether or not human communities take adequate steps to protect wild nature.

Whilst, thanks to science, we can now answer some of God's questions to Job (such as the gestation period of wild goats), there is much more that we do not know. As Arthur Peacocke puts it: "Our awareness of our ignorance grows in parallel with, indeed faster than, the growth in our knowledge" [1979, 65]. This is not to belittle scientific conclusions, but to remind us that they should be tentative, and open to correction from further research and other disciplines. Science alone cannot change human behaviour. For that, the riches of Christian and other faith traditions are essential.

Today, post-Enlightenment divisions between science and theology are gradually being overcome. William Brown states: "Science is recognizing its own limitations ... and theology is acknowledging its need for scientific input, even vision, in its accounting of the cosmos as creation" [1999, 16-17]. A recent volume on *Religion and the New Ecology* similarly, speaks of the "conviction that only deep and sustained conversations among specialists from different disciplines can overcome the intellectual balkanization that characterizes many contemporary colleges and universities" [Lodge and Hamlin 2006, 11]. The book of Job, with its emphasis on all truth as God's truth, supports such a view. The epistemological search is not so much completing a tidy jigsaw, as mapping a route using photographs taken from a variety of perspectives and in varying conditions of light and weather.

Today, secular conservationists, both activists and academics, are recognising that science alone cannot change human behaviour sufficiently to address nature's decline. Eminent conservation biologist and agnostic, E. O. Wilson writes, "Religion and science are the two most powerful forces in the world today ... If [they] could be united on the common ground of biological conservation, the problem would soon be solved" [2006, 5]. Similarly, writing as both scientist and Christian, Sir Ghilleen Prance, former Director of the Royal Botanic Gardens at Kew, states, "There is a realisation that the crisis is a moral and ethical one and that scientists and ecologists alone will not be able to solve it" [Prance 2002].

Engaging faith communities in conservation has become increasingly mainstream. Examples are numerous, and include a major five-year programme on World Faiths and the Environment

between the World Bank [2006] and WWF [2005], initiatives by Conservation International [2010], BirdLife International [O'Connor 2011] and the Sierra Club [2008], and research at Yale²² and Oxford Universities [Bhagwat et al. 2011]. In 2016, IUCN (the 'UN of conservation') initiated an ongoing "Spirituality and Conservation Journey" [IUCN 2016i], encouraging the engagement of all faith traditions.

All of this encourages further cooperation between Conservation Biology and faith communities in preserving wild nature. Given the long history of mistrust between science and faith [Brooke 1991] and historic tensions amongst faith communities, it is important to find agreed methodologies, including, "a compromise of divergent perspectives so as to enable the emphasis to be on finding common grounds (e.g., saving creation), mutual respect and empathy" [Awoyemi 2012].

There is substantial room for further research in this area, beyond the scope of this thesis. Initial enquiries suggest the fruitfulness of Wentzel van Huyssteen's work on "postfoundationalism" [1993; 2006; 2014], which recognises theology and science as different but "mutually illuminating approaches to one and the same reality" [1993, 429], and seeks "the kind of space where different voices ... are in fact dynamically interactive with one another" [2014, 214]. Further helpful insights lie in 'Scriptural Reasoning',²³ a form of interfaith dialogue which respects irreconcilable differences whilst encouraging mutual learning and cooperation based on carefully defined shared objectives or values. Michael Barnes speaks of the goal of interfaith dialogue as "putting together the terms of what Charles Taylor calls a 'social imaginary'" [Barnes 2012, 8], namely the complex structure of social reality in a plural context.

Bringing together the worldviews of secular conservationists and various world faiths need not undermine particularity, but necessitates all participants approaching the views of others with respect and humility, laying aside any perceived ideological superiorities, and indwelling a shared space, recognising all worldviews, scientific or religious, are comprised of 'the myths we live by' [Midgley 2004], the self-reinforcing symbols and stories by which we interpret the world.

This is critical for participatory discourse between conservation scientists and indigenous and faith-based groups because "Conservation is often thought of as something imposed on local

²² <http://fore.yale.edu>

²³ <http://www.scripturalreasoning.org>

peoples by outsiders; it must instead be seen as something we all negotiate collectively as good stewardship” [Chan et al. 2016, 1464]. As the latest edition of *Key Topics in Conservation Biology* notes, “conservation is not the sole preserve of the professional conservation biologist” and engaging with diverse potential partners requires cultural sensitivity and intellectual humility [Gosler et al. 2013, 94].

These various examples suggest potential new approaches to engaging conservation biology with biblical theology and other faith-based understandings. At a critical point for the survival of ecosystem integrity and species diversity, and with the fresh engagement of faith communities regarding the relevance of their sacred texts and traditions to wild nature, there is a significant opportunity for an integrated scientific and faith-based engagement between biblical theology and conservation biology.

BIBLIOGRAPHY

- Adams, W. M. (2004). *Against Extinction: The Story of Conservation*. London, Earthscan Publications.
- Adams, W. M. (2014). "The value of valuing nature." *Science* 346(6209): 549-551.
- Allen, D. E. (2001). *Naturalists and Society: The Culture of Natural History in Britain 1700-1900*, Aldershot, Hants and Burlington, VA, Ashgate.
- Alexander, T. D. (2018). *The City of God and the Goal of Creation*. Wheaton, IL, Crossway.
- Ambrose (2001). *Commentary of St. Ambrose on the Gospel According to St. Luke*. Dublin, Halycon Press.
- Alter, R. (1996). *Genesis: Translation and Commentary*. New York, W. W. Norton & Co.
- Anderson, T. R., et al. (2016). "CO₂, the greenhouse effect and global warming: from the pioneering work of Aarhenius and Callendar to today's Earth Sytem Models." *Endeavour* 40(3): 178-187.
- Apple, R. (2016). "Addenda to Psalm 145." *Jewish Bible Quarterley*, Retrieved 6th Dec. 2018, from <http://jbnqnew.jewishbible.org/index/author/raymond-apple/addenda-psalm-145>.
- Aquinas, T. (1917). *Summa Theologiae*. New York, Benzinger Brothers.
- Aristotle. (2008) *Politics*. New York, Cosimo Classics
- Armstrong, Patrick. (2000) *The English Parson-Naturalist: A Companionship between Science and Religion*. Leominster, Gracewing.
- Arnold, B. T. and B. E. Beyer, Eds. (2002). *Readings from the Ancient Near East: Primary sources for Old Testament study*. Grand Rapids, MI, Baker.
- Atkinson, D. (2015). *Climate Change and the Gospel: Why we in the Churches need to treat Climate Change more Urgently*. London.
- Attfield, R. (1983). "Christian Attitudes to Nature." *Journal of the History of Ideas* 44(3): 369-386.
- Attfield, R. and K. Dell, eds. (1996). *Values, Conflict and the Environment*. Aldershot, Avebury.

Attfield, R. (2006) "Environmental Sensitivity and Critiques of Stewardship." Ch. 6: 76-91 in *Environmental Stewardship*, edited by R. J. Berry. London: T. & T. Clark.

Audubon, J. J. (1835) *Ornithological Biography, or, an Account of the Habits of the Birds of the United States of America*. Edinburgh, A. Black.

Awoyemi, S. M., et al. (2012). Global Efforts to Bridge Religion and Conservation: Are They Really Working? *Topics in Conservation Biology*. T. Povilitis. Rijeka, Croatia, InTech.

Azzopardi, J. (1981). "The Flood in Genesis and the epic of Gilgamesh." *Melita Theologica* 32(1): 1-5.

Bacon, F. (1966). The Masculine Birth of Time. *The Philosophy of Francis Bacon*. B. Farrington. Chicago, Chicago University Press.

Baker, W. H. (1991). *In the Image of God: A Biblical View of Humanity*. Chicago, Moody Press.

Balabanski, V. (2002). John 1 - the Earth Bible Challenge: An Intra-textual Approach to Reading John 1. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski. Sheffield, Sheffield Academic Press: 89-94.

Balirwa, J. S., et al. (2003). "Biodiversity and Fishery Sustainability in the Lake Victoria Basin: An Unexpected Marriage?" *BioScience* 53(8): 703-715.

Banner, M. (1999). *Christian Ethics and Contemporary Moral Problems*. Cambridge, CUP.

Banner, M. (2009). *Christian Ethics – A Brief History*. Chichester, Wiley-Blackwell.

Barnes SJ, M. (2012). *Interreligious Learning: Dialogue, spirituality and the Christian imagination*. Cambridge, Cambridge University Press.

Barnosky, A. D; Hadly, E. A; Bascompte, J. et al., (2012). "Approaching a State Shift in Earth's Biosphere." *Nature* 486. 52-58.

Barr, J. (1968). "The Image of God in the Book of Genesis: A study in terminology." *BJRL (Bulletin of the John Rylands University Library of Manchester)* 51(1): 11-26.

Barr, J. (1972). "Man and Nature - The Ecological Controversy and the Old Testament." *BJRL (Bulletin of the John Rylands University Library of Manchester)* 55: 9-32.

Barr, J. (1980). "Childs' Introduction to the Old Testament as Scripture." *Journal for the Study of the Old Testament* 16: 12-23.

Barrett, C. K. (1953). "New Testament Eschatology." *Scottish Journal of Theology* 6 (3): 225-243.

Barrett, C. K. (1985). *The Gospel according to St. John: An Introduction with Commentary and notes on the Greek text (2nd ed.)*. London, SPCK.

.

Barton, G. A. (2002) *Empire Forestry and the Origins of Environmentalism*. Cambridge, CUP.

Barth, K. (1958). *Church Dogmatics vol. 3: The Doctrine of Creation, part 1: The work of Creation*. Edinburgh, T. & T. Clark.

Barton, J. (1984) *Reading the Old Testament: Method in Biblical Study*. London, DLT.

Barton, J., ed. (1998) *The Cambridge Companion to Biblical Interpretation*. Cambridge, CUP.

Batavia, C. and M. P. Nelson (2017). "For goodness sake! What is intrinsic value and why should we care?" *Biological Conservation* 209: 366-376.

Bate, J. (1991) *Romantic Ecology: Wordsworth and the Environmental Tradition*. London, Routledge.

Bauckham, R. (1983). *Word Biblical Commentary: 2 Peter and Jude*. Nashville, TN, Thomas Nelson.

Bauckham, R. (1993). *The Theology of the Book of Revelation*. Cambridge, CUP.

Bauckham, R. (1994). Jesus and the Wild Animals (Mark 1:13): A Christological Image for an Ecological Age. *Jesus of Nazareth: Lord and Christ: Essays on the Historical Jesus and New Testament Christology*. J. B. Green and M. Turner. Grand Rapids, MI, Eerdmans: 3-21.

Bauckham, R. (1995). *The Theology of Jürgen Moltmann*. New York, T. & T. Clark

Bauckham, R. (2003) "Reading Scripture as a Coherent Story." In *The Art of Reading Scripture*, edited by E. F. Davis and R. B. Hays, 38-53. Grand Rapids, MI, Eerdmans.

Bauckham, R. and C. Mosser (eds.), (2008). *The Gospel of John and Christian Theology*. Grand Rapids, MI, Eerdmans.

Bauckham, R. (2009). *Jesus and the Renewal of Nature: Reading Isaiah and the Gospels Ecologically*. St Tikhon's Orthodox Seminary, Moscow: 10.

Bauckham, R. (2010) *Bible and Ecology: Recovering the Community of Creation*. London, DLT.

Bauckham, R. (2011). *Living with Other Creatures: Green Exegesis and Theology*. Waco, TX, Baylor University Press.

Bauckham, R. (2015). The Incarnation and the Cosmic Christ. *Incarnation: on the scope and depth of Christology*. N. H. Gregersen. Minneapolis, MN, Fortress: 25-58.

Bauckham, R. (Undated). *A Sermon on John 17:6-19*. Retrieved 2nd Jan. 2018: <http://richardbauckham.co.uk/uploads/Sermons/Jn%2017.6-19.pdf>.

BBC / Black, Richard. (2011) *Nature 'Is Worth Billions' to UK*. BBC News Online. Retrieved 2nd Jan. 2018: <http://www.bbc.co.uk/news/science-environment-13616543>.

Beale, G. K. (1998). *The New International Greek Testament Commentary: The Book of Revelation*. Grand Rapids, MI, W. B. Eerdmans.

Beckerman, W. and J. Pasek (1997). "Plural Values and Environmental Valuation." *Environmental Values* 6.

Bekoff, M. (2007). *The Emotional lives of Animals: a leading scientists explores animal joy, sorrow, and empathy - and why they matter*. Novato, CA, New World Library.

Bell, R. D. (2018). *Theological Themes of Psalms: The theology of the book of Psalms*. Eugene, OR, Wipf & Stock.

Benn, H. (2008) Speech by Rt. Hon. Hilary Benn MP at launch of UNEP's Green Economy Initiative, quoted in Cooper, N. et al. (2009), *A Conversation Review: Valuing Ecosystem Services*, unpublished paper.

Bentham, J. (1876 reprint of 1823 ed.). *An Introduction to the Principles of Morals and Legislation*, Clarendon Press, Oxford.

- Berger, P. (2012). "Further thoughts on Religion and Modernity." *Society* 49(4): 313-316.
- Berry, R. J., (ed.) (2000). *The Care of Creation*. Leicester, IVP.
- Berry, R. J. (2001). "John Ray, Father of Natural Historians." *Science and Christian Belief*. 13: 25-38.
- Berry, T. (1988). *The Dream of the Earth*. San Francisco, Sierra Club Books.
- Berry, T. (1999). *The Great Work: our way into the future*. New York, Bell Tower Press.
- Berry, W. (1981) *The Gift of Good Land: Further Essays Cultural and Agricultural*. Berkeley, CA, Counterpoint.
- Berry, W. (1986) *The Unsettling of America: Culture and Agriculture*. San Francisco, Sierra Club.
- Berry, W. (1999), *The Selected Poems of Wendell Berry*, Counterpoint Press
- Bhagwat, S. A. and M. Palmer (2009). "Conservation: The World's Religions can Help." *Nature* (461): 37.
- Bhagwat, S. A., et al. (2011). "Religious following in Biodiversity Hotspots: Challenges and Opportunities for Conservation and Development." *Conservation Letters* 4(3): 234–240.
- Blenkinsopp, J. (1992). *The Pentateuch: An Introduction to the First Five Books of the Bible*. New York, Doubleday.
- Bolger, T. (2001). "The Functional Value of Species Biodiversity: A Review." *Biology and Environment: Proceedings of the Royal Irish Academy* 101B(3): 199-224.
- Boecker, H. J. (1964). *Redeformen des Rechtlebens im Alten Israel*. Neukirchen, Neukirchener Verlag.
- Bookless, D. (2014). *"Let Everything that has Breath Praise the Lord": The Bible and Biodiversity*. Cambridge Papers. Cambridge, Jubilee Centre.
- Bookless, D. (2016). 'Why Should I care?' Evangelical Perspectives on Earthcare. *Creation Care in Christian Mission*. K. J. Kaoma. Oxford, Regnum Books: 105-120.

Bookless, D. (IN PRESS). The Bible and Wildlife Conservation. *The Oxford Handbook of Bible and Ecology*. H. Marlow and M. Harris. Oxford, OUP.

Bormann, F.H. (1976) "An Inseparable Linkage: Conservation of Natural Ecosystems and the Conservation of Fossil Energy", *BioScience*, 26, 754-760

Borowski, O. (1998). *Every Living Thing: Daily Use of Animals in Ancient Israel*. Walnut Creek, CA, AltaMira Press.

Bouma-Prediger, S. (2001). *For The Beauty of the Earth: A Christian Vision for Creation Care*. Grand Rapids, MI, Baker Academic.

Bredin, M. (2010). *The Ecology of the New Testament: Creation Re-creation and the Environment*. Colorado Springs, CO, Biblica Publishing.

Brinton, H. G. (2016). "Between text and sermon: Revelation 21:1-22:7." *Interpretation* 70 (1): 24-26.

Bromiley., G. W., (ed.). (1995). *The International Standard Bible Encyclopedia: Q-Z*. Grand Rapids, MI, Eerdmans.

Brooke, J. H. (1991). *Science and Religion: some historical perspectives*. Cambridge, Cambridge University Press.

Brown, R. D. (2007) "The History of Wildlife Conservation and Research in the United States – with Implications for the Future." Proceedings of the Taiwan Wildlife Association Taipei: Taiwan National University: 1-30.

Brown, W. P. (1999) *The Ethos of the Cosmos: The Genesis of Moral Imagination in the Bible*. Grand Rapids, MI, W B Eerdmans.

Bruce, F. F. (1981). *The New Testament Documents: Are They Reliable?* Downer's Grove, IL, InterVarsity Press.

Brueggemann, D. (1989). "Brevard Childs' Canon Criticism: An Example of Post-critical Naiveté." *Journal of the Evangelical Theological Society* 32: 311-326.

Brueggemann, W. (1978) "The Canonical Shape of the Prophetic Literature." *Interpretation* 32, no. 1: 46-55.

- Brueggemann, W. (1982). *Genesis*. Atlanta, John Knox Press.
- Brueggemann, W. (1997). *Theology of the Old Testament: Testimony, Dispute, Advocacy*. Minneapolis, Fortress Press.
- Brueggemann, W. (2002). *The Land: Place and Gift, Promise and Challenge in Biblical Faith*. Minneapolis, MN, Fortress Press.
- Budiansky, S. (1996) *Nature's Keepers: The New Science of Nature Management*. London, Phoenix Giant
- Bull, J. et al. (2013) "Biodiversity Offsets in Theory and Practice." *Oryx* 47, 3: 369-80.
- Busenitz, I. A. (1999). "Introduction to the Biblical Covenants: The Noahic Covenant and the Priestly Covenant." *The Master's Seminary Journal* 10(2): 173-189.
- Callicott, J. B. (1989) *In Defense of the Land Ethic: Essays in Environmental Philosophy*. Albany, NY, New York State University Press.
- Callicott, J. B. (1995). "Intrinsic Value in Nature: a Metaethical Analysis." *The Electronic Journal of Analytic Philosophy* (3).
- Callicott, J. B. (1999). *Genesis and John Muir. Beyond the Land Ethic: More Essays in Environmental Philosophy*. New York, SUNY: 187-220.
- Calvin, J. (1965). *Genesis*. Edinburgh, Banner of Truth Trust.
- Carey, G. (2016). *Apocalyptic Literature in the New Testament*. Nashville, TN, Abingdon Press.
- Carson, D. A. (2007). *New Testament Commentary Survey*. Grand Rapids, MI, Baker Academic.
- Chan, K. M. A., et al. (2012). "Rethinking ecosystem services to better address and navigate cultural values." *Ecological Economics* 74: 8-18.
- Chan, K. M. A., et al. (2016). "Why Protect Nature? Rethinking Value and the Environment." *PNAS* 113(6): 1462-1465.

Chee, Y. E. (2004). "An Ecological Perspective on the Valuation of Ecosystem Services." *Biological Conservation* 120: 549–565.

Childs, B. S. (1978) "The Canonical Shape of the Prophetic Literature." *Interpretation* 32, no. 1: 46-55.

Childs, B. S. (1979). *Introduction to the Old Testament as Scripture*. London, SCM.

Childs, B. S. (1993) *Biblical Theology of the Old and New Testaments: Theological Reflection on the Christian Bible*. Minneapolis, MN, Fortress Press.

Church, P., et al., (eds.) (2011). *The Gospel and the Land of Promise: Christian approaches to the land of the Bible*. Eugene, OR, Pickwick Publications.

Clements, R. E. (1995) "Wisdom and Old Testament Theology." In *Wisdom in Ancient Israel: Essays in Honour of J. A. Emerton*, edited by Day, John, Robert P. Gordon and H. G. M. Williamson. Cambridge, CUP: 269-86.

Clines, D. J. A. (1968). "The Image of God in Man." *Tyndale Bulletin* 19: 53-103.

Clines, D. J. A. (1972). "Noah's Flood 1: The Theology of the Flood Narrative." *Faith and Thought* 100:2, 128-142.

Clough, D. L. (2012). *On Animals: Systematic Theology: I*. London, Bloomsbury T. & T. Clark.

Cohen, J. (1989). *"Be Fertile and Increase, Fill the Earth and Master it": Ancient and Medieval Career of a Biblical Text*. Ithaca, NY, Cornell University Press.

Coleman, R. (1990). *Mission in a Broken World: Report of ACC-8: Wales 1990*, Anglican Consultative Council.

Collins, J. J. (1998). *The Apocalyptic Imagination: An Introduction to Jewish Apocalyptic Literature* (2nd ed.). Grand Rapids, MI, W. B. Eerdmans.

Conradie, E. M. (2000). *Hope for the Earth: Vistas for a New Century*. Eugene, OR, Wipf & Stock.

Conradie, E. M. (ed.). (2012). *Creation and Salvation Volume 2: A Companion on Recent Theological Movements*. Studies in Religion and the Environment. Zurich, Lit Verlag GMBH.

Conservation International (2010). *"Incredible Array of New Species Found in Remote Papua New Guinea."*

https://www.conservation.org/NewsRoom/pressreleases/Pages/New_Species_Papua_New_Guinea_Muller_Nakanai.aspx. (Retrieved, 2nd Jan. 2018)

Convention on Biological Diversity. (2010) *What Is Biodiversity?*: United Nations Environment Programme.

Cooper, N. et al. (2009) *A Conversation Review: Valuing Ecosystem Services*, unpublished paper.

Cooper, N., et al. (2016). "Aesthetic and spiritual values of ecosystems: Recognising the ontological and axiological plurality of cultural ecosystem 'services'." *Ecosystem Services* 21: 218-229.

Costanza, R. et al. (1997). "The Value of the World's Ecosystem Services and Natural Capital." *Nature* 387(6630): 253-260.

Costanza, R., et al. (2014). "Changes in global value of ecosystem services." *Global Environmental Change* 26: 152-158.

Crabtree, S. and B. Pelham (2009). *What Alabamians and Iranians Have in Common: A Global Perspective on Americans' Religiosity Offers a Few Surprises*, Gallup. Retrieved 2nd Jan. 2018 from <http://www.gallup.com/poll/114211/Alabamians-Iranians-Common.aspx>.

Cranfield, C. E. B. (1959). *The Gospel According to St. Mark*. (CGTC) Cambridge, CUP.

Cranfield, C. E. B. (1985). *Romans: A shorter commentary*. Edinburgh, T. & T. Clark.

Crenshaw, J. L. (1969). "Method in Determining Wisdom Influence upon Historical Literature." *Journal of Biblical Literature* 88(2): 129-142.

Crenshaw, J. L. (1998) *Old Testament Wisdom: An Introduction*. Louisville: KY, Westminster John Knox Press.

Cruetzen, P J, and E F Stoermer. (2000) "The Anthropocene." *Global Change Newsletter*, 41: 17-18.

Culpepper, R. A. (1988). "The Theology of the Gospel of John." *Review and Expositor* 85 (3): 417-432.

Curran, Michael, Stefanie Hellweg, and Jan Beck. (2014) "Is There Any Empirical Support for Biodiversity Offset Policy?" *Ecological Applications* 24, no. 4: 617-32.

Daily, G.C. (1997) "Introduction: What Are Ecosystem Services?". In *Nature's Services: Societal Dependence on Natural Ecosystems*, edited by G.C. Daily, 1-10. Washington, DC, Island Press.

Daly-Denton, M. (2017). *Supposing Him to be the Gardener: An Earth-conscious reading of the Fourth Gospel*. London, Bloomsbury, T. & T. Clark.

Davids, P. H. (2006). *The Letters of 2 Peter and Jude*. Grand Rapids, MI, W. B. Eerdmans.

Davies, W. D. and D. C. Allison (2004). *Matthew 19-28: Volume 3*. London, T. & T. Clark.

Davis, E. F. (2000). *Proverbs, Ecclesiastes, and the Song of Songs*. Louisville, KY, Westminster John Knox.

Davis, E. F. (2009a) *Scripture, Culture, and Agriculture: An Agrarian Reading of the Bible*. Cambridge, CUP.

Davis, E. F. (2009b). "The Agrarian Perspective of the Bible: A Response to James A. Nash, 'The Bible vs. Biodiversity: The Case Against Moral Argument from Scripture'." *Journal for the Study of Religion, Nature and Culture* 3:2, 260-265.

Deane-Drummond, C.E. (2004) *The Ethics of Nature*, Malden, MA, Blackwell

Deane-Drummond, C. and B. Rossing (2013). "The Eco-Theological Significance of John 10:10." *The Ecumenical Review* 65(1): 83-97.

DEFRA. (2012) *Biodiversity Offsetting Pilots Technical Paper: The Metric for the Biodiversity Offsetting Pilot in England*.

Dell, K. (1991) *The Book of Job as Sceptical Literature*. Berlin: Walter de Gruyter.

Dell, K. (2000) 'Get Wisdom, Get Insight': *An Introduction to Israel's Wisdom Literature*. London, DLT.

DeWitt, C. B. (2007) *Earth-Wise: A Biblical Response to Environmental Issues*. Grand Rapids, MI, Faith Alive Christian Resources.

Dickman, A. et al. (2015) "The Moral Basis for Conservation: How Is It Affected by Culture?" *Frontiers in Ecology and Environment* 13, no. 6: 325-31.

Dooyeweerd, H. (1955). *A New Critique of Theoretical Thought: The General Theory of the Modal Spheres*. Amsterdam, H. J. Paris.

Douglas, J. (1978) "Biologists urge US endowment for conservation," *Nature* 275, no. 5676.

Douglas, M. (1993). "The forbidden animals in Leviticus." *Journal for the Study of the Old Testament* 59: 3-23.

Douglas, M. (1999). *Leviticus as Literature*. Oxford, Oxford University Press.

Dresseler, W., and R. Roth. (2011) "The Good, the Bad and the Contradictory: Neoliberal Conservation Governance in Rural Southeast Asia." *World Development* 29, no. 5, 851-62.

Dulles, A. (2002). *Models of the Church*. New York, Image Books / Doubleday.

Dunn, J. D. G. (1988a). *Word Biblical Commentary 38A: Romans 1-8*. Dallas, TX, Word Books.

Dunn, J. D. G. (1988b). *Word Biblical Commentary 38B: Romans 9-16*. Dallas, TX, Word Books.

Dyer, K. D. (2002). When is the end not the end? The fate of Earth in Biblical Eschatology. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski (eds.). London, Sheffield Academic Press.

Echlin, E. P. (1999). *Earth Spirituality: Jesus at the Centre*. New Alresford, John Hunt Publishing.

Ecosystem Markets Task Force. (2013) *Realising Nature's Value: The Final Report of the Ecosystem Markets Task Force*. London, UK Government.

Edwards, D. (2006). "Every Sparrow that Falls to the Ground: Evolution and the Cost of the Christ-Event." *Ecotheology* 11(1): 106-123.

Eichrodt, W. (1961). *Theology of the Old Testament*. Philadelphia, PA, Westminster Press.

Elsdon, R. (2000). Eschatology and Hope. *The Care of Creation*. R. J. Berry. Leicester, IVP.

- Elton, C. S. (1958). *The ecology of invasions by animals and plants*. London, Methuen.
- Environment Agency. (2007) "*The Fifty Things that will Save the Planet*." Environment Agency.
- European Commission. (2008) *The Economics of Ecosystems and Biodiversity*. Brussels, European Community
- Evans, C. A. (2001). *Word Biblical Commentary: Mark 8:27-16:20*. Nashville, TN, Thomas Nelson.
- Evans, D. M., et al. (2015). "Biodiversity offsetting: what are the challenges, opportunities and research priorities for animal conservation?" *Animal Conservation* 18(1): 1-3.
- Fager, J. A. (1993). *Land Tenure and the Biblical Jubilee: Uncovering Hebrew Ethics through the Sociology of Knowledge*. Sheffield, Sheffield Academic Press.
- Faricy, R. (1982). *Wind and Sea Obey Him: Approaches to a Theology of Nature*. London, SCM.
- Fiddes, P. S. (2013). *Seeing the World and Knowing God: Hebrew Wisdom and Christian Doctrine in a Late-Modern Context*. Oxford, OUP.
- Fiorenza, E.S., and D. Tracy, eds. (1984) *The Holocaust as Interruption*, Concilium. Edinburgh, T. & T. Clark.
- Flor, E. (2002). The Cosmic Christ and Ecojustice in the New Cosmos (Ephesians 1). *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski. Sheffield, Sheffield Academic Press: 136-147.
- FOEE. (2014) *Nature Is Not for Sale: The Dangers of Commodifying Our Natural World*. Brussels: Friends of the Earth Europe.
- Ford, D. (1999). *Self and Salvation: being transformed*. Cambridge, CUP.
- Ford, D. (2006). "An Interfaith Wisdom: Scriptural Reasoning between Jews, Christians and Muslims." *Modern Theology* 22(3): 345-366.
- Ford, D. (2007). *Christian Wisdom: Desiring God and Learning in Love*. Cambridge, CUP.
- Ford, D. (2011) *The Future of Christian Theology*. Oxford, Wiley-Blackwell.

- Ford, D. (2014) *The Drama of Living: Becoming Wise in the Spirit*, Norwich, Canterbury Press.
- Fowl, S. (1985). "The Canonical Approach of Brevard Childs." *The Expository Times* 96(6): 173-176.
- Fox, S. (1981). *John Muir and His Legacy: The American Conservation Movement*. Boston, Little Brown.
- France, R. T. (2002). *The Gospel of Mark*. (NIGTC) Grand Rapids, MI, W. B. Eerdmans.
- France, R. T. (2007). *The Gospel of Matthew*. (NICNT) Grand Rapids, MI, W. B. Eerdmans.
- Francis (2015). *Laudato Si' - On the Care of our Common Home (English Language Version)*. Holy See. Vatican City, Libreria Editrice Vaticana.
- Futuyama, Douglas J. (1998) *Evolutionary Biology*. 3rd ed., Sunderland, MA, Sinauer Associates.
- Galton, Francis (1883). *Inquiries into human faculty and its development*. London, Macmillan.
- Garlington, D. (2003). *Exegetical Essays*. Eugene, OR, Wipf & Stock.
- Gilmour, M. J. (2014). *Eden's Other Residents: The Bible and Animals*. Eugene OR, Cascade Books.
- Glacken, C. J. (1967) *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley, CA , University of California Press.
- Gnanakan, K. (1999). *God's World: A Theology of the Environment*. London, SPCK.
- Gordis, R. (1985) "Job and Ecology (And the Significance of Job 40:15)." In *Biblical and Other Studies in Memory of S. D. Goitein*, edited by Ahroni, R. HAR. Columbus, OH, Ohio University Press, 189-202.
- Gordon, Ascelin, Joseph W. Bull, Chris Wilcox, and Martine Maron. (2015) "Perverse Incentives Risk Undermining Biodiversity Offset Policies." *Journal of Applied Ecology* 52, no. 2: 532-37.
- Gorman, M. J. (2011). *Reading Revelation Responsibly: Uncivil Worship and Witness: Following the Lamb into the New Creation*. Eugene, OR, Cascade Books.

Gosler, A., et al. (2013). Leadership and Listening: Inspiration for Conservation Mission and Advocacy. *Key Topics in Conservation Biology* 2. D. W. Macdonald and K. J. Willis. Hoboken, NJ / Oxford, Wiley-Blackwell: 92-109.

Green, G. L. (2008). *Jude and 2 Peter*. Grand Rapids, MI, Baker Academic.

Green, R. E., et al. (2004). "Diclofenac poisoning as a cause of vulture population declines across the Indian subcontinent." *Journal of Applied Ecology* 41(5): 793-800.

Gregersen, N. H., ed. (2015a). *Incarnation: on the scope and depth of Christology*. Minneapolis, MN, Fortress, 229

Gregersen, N. H. (2015b). "J. Wentzel van Huyssteen: Exploring venues for an interdisciplinary theology." *Theology Today* 72(2): 141-159.

Greggs, T. (2012). "Article Review: David Kelsey, *Eccentric Existence: A Theological Anthropology*." *Scottish Journal of Theology* 65(4): 449-463.

Gregorios, P. M. (1990). New Testament Foundations for Understanding the Creation. *Liberating Life: Contemporary Approaches in Ecological Theology*. C. Birch, W. Eaken and J. McDaniel. Maryknoll, NY, Orbis: 37-45.

Grey, W. (1998). "Environmental Value and Anthropocentrism." *Ethics and the Environment* 3(1): 97-103.

Guelich, R. A. (1989). *Word Biblical Commentary 34A: Mark 1-8:26*. Dallas, TX, Word Books.

Gunton, R. M., et al. (2017). "Beyond Ecosystem Services: valuing the invaluable." *Trends in Ecology and Evolution* 32(4): 249-257.

Habel, N. C. (1985) *The Book of Job*. Philadelphia, PA, Westminster Press.

Habel, N. C. (1995). *The Land is Mine: Six Biblical Land Ideologies*. Minneapolis, MN, Fortress Press.

Habel, N. C. and S. Wurst (2000). *The Earth Story in Genesis*. Sheffield, Sheffield Academic Press.

Habel, N. C. and S. Wurst (2001). *The Earth Story in Wisdom Traditions*. Sheffield, Sheffield Academic Press.

Habel, N. C., and Balabanski, V. (eds.) (2002) *The Earth Story in the New Testament. Vol. 4, The Earth Bible*. Sheffield, Sheffield Academic Press.

Habel, N. C. (2009) *An Inconvenient Text: Is a Green Reading of the Bible Possible?* Adelaide, ATF Press.

Hagner, D. A. (1971). "The Vision of God in Philo and John: A Comparative Study." *Journal of the Evangelical Theological Society* 14: 81-93.

Hall, H. (undated). *The Bible and Animal Welfare*. Hook, Hampshire, Anglican Society for the Welfare of Animals.

Hall, K. (2001). "The Theology of Genesis 1–11." *Southwestern Journal of Theology* 44 (1): 56–74.

Hamilton, V. P. (1990). *The Book of Genesis Chapters 1-17*. Grand Rapids, MI, W. B. Eerdmans.

Hanegraaff, H. (2007). *The Apocalypse Code*. Nashville, Thomas Nelson.

Harrison, P. (1999) "Subduing the Earth: Genesis 1, Early Modern Science, and the Exploitation of Nature." *The Journal of Religion* 79, no. 1: 86-109.

Hasselaar, J. J. (2016). Invisible hand, helping hand and loving hand joining together: economics and theology on climate change. *Sustainable Development and the Contribution of Church Communities*. UCSIA, Bruges: 1-22.

Hauerwas, S. and S. Wells, (eds.) (2006). *The Blackwell Companion to Christian Ethics*. Oxford, Blackwell.

Hays, R. B. (2016). *Echoes of Scripture in the Gospels*. Waco, TX, Baylor University Press.

Hegel, G. W. F. (1962). *Lectures on the Philosophy of Religion*. London, Routledge & Kegan Paul.

Heil, J. P. (2006). "Jesus with the Wild Animals in Mark 1:13." *Catholic Bible Quarterly* 68: 63-78.

Hessel, D. T. and R. R. Ruether (2000). *Christianity and Ecology: Seeking the Well-Being of Earth and Humans*. Cambridge, MA, Harvard University Press.

- Hey, J. (2001) "The Mind of the Species Problem." *Trends in Ecology and Evolution* 16, no. 7: 326-29.
- Hey, J. et al. (2003) "Understanding and Confronting Species Uncertainty in Biology and Conservation." *Trends in Ecology and Evolution* 18, no. 11: 597-600.
- Heywood, V.H., ed. (1995) *Global Biodiversity Assessment*. Cambridge: UNEP / CUP.
- Hiebert, T. (1996). *The Yahwist's Landscape: Nature and Religion in Early Israel*. Oxford, OUP.
- Hoekstra, J. M. et al. (2005) "Confronting a Biome Crisis: Global Disparities of Habitat Loss and Protection." *Ecology Letters*, no. 8: 23-29.
- Honderich, T. (2005). *The Oxford Companion to Philosophy*. Oxford, OUP.
- Horrell, D. G., et al., (eds.) (2010). *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. London, T. & T. Clark.
- Hursthouse, R. (2002). *On Virtue Ethics*. Oxford, Oxford University Press.
- Hursthouse, R. (2007). Environmental Virtue Ethics. *Environmental Ethics*. R. L. Walker and P. J. Ivanhoe. Oxford, Oxford University Press.
- Hutchins, M. and C. Wemmer (1986). Wildlife Conservation and Animal Rights: are they compatible? *Advances in animal welfare science 1986-1987*. M. W. Fox and L. D. Mickley. Washington DC, The Humane Society of the United States: 111-137.
- Hutchins, M. (2008). "Animal Rights and Conservation." *Conservation Biology* 22(4): 815-816.
- IUCN, (2009) *Wildlife Crisis worse than Economic Crisis*, Retrieved 2nd Jan. 2018 from <https://www.iucn.org/content/wildlife-crisis-worse-economic-crisis-%E2%80%93-iucn>.
- IUCN (2016i). *Spirituality and Conservation Journey Programme: get ready to be inspired*. World Conservation Congress, Hawaii, IUCN.
- IUCN (2016ii). *Commission on Ecosystem Management: Draft Mandate 2017-2020*. World Conservation Congress, Hawaii, IUCN.

Iyer, S. et al.(2012) *Divine Innovation: Religion and Service Provision by Religious Organizations in India*, Cambridge, Cambridge Service Alliance.

James, S. R. (2009). *The Presence of Nature: A Study in Phenomenology and Environmental Philosophy*. London, Palgrave MacMillan.

Janzen, J. . (1985) *Job*. Atlanta, GA, John Knox Press.

Jenkins, W. (2008). *Ecologies of Grace: Environmental Ethics and Christian Theology*. New York, OUP.

Johnson, E. (2015). Jesus and the Cosmos: soundings in deep Christology. *Incarnation: on the scope and depth of Christology*. N. H. Gregersen. Minneapolis, MN, Fortress: 133-156.

Jones, J. (2003). *Jesus and the Earth*. London, SPCK.

Jung, C. G. (1984) *Answer to Job: Researches into the Relation Between Psychology and Religion*. London, Routledge.

Juniper, T. (2013). *What has Nature Ever Done for Us? How Money Really Does Grow on Trees*. London, Profile Books.

Justus, J. et al. (2009) "Buying into Conservation: Intrinsic versus Instrumental Value." in *Trends in Ecology and Evolution*, Vol.24 No.4, 187-191

Kanagaraj, J. J. (2005). *The Gospel of John: A Commentary*. Secunderabad, OM Books.

Kant, I. (1997). *Lectures on Ethics*. Cambridge, CUP.

Keener, C. S. (2004). *The Gospel of John: A Commentary (2 Vols)*. Peabody, MA, Hendrickson.

Kelsey, D. H. (2009) *Eccentric Existence: A Theological Anthropology*. 2 vols Louisville, KY, Westminster John Knox Press.

Kidner, D. (1981). *The Message of Hosea*. Leicester, IVP.

Kidner, D. (2008). *Genesis: an introduction and commentary*. Downers Grove, IL., IVP Academic.

Kinsler, R. and G. Kinsler (1999). *The Biblical Jubilee and the Struggle for Life*. Maryknoll, NY, Orbis Books.

Kirk, J. Andrew. (1979) *Liberation Theology: An Evangelical View from the Third World*. London, Marshall, Morgan & Scott.

Kline, M. G. (1963). *Treaty of the Great King*. Grand Rapids, MI, W. B. Eerdmans.

Kline, M. (2006). *Kingdom Prologue: Genesis foundations for a covenantal worldview*. Eugene, OR, Wipf & Stock.

Koester, C. R. (2008). *The Word of Life: A theology of John's Gospel*. Grand Rapids, MI, Eerdmans.

Küng, H. (1966). *On Being a Christian*. Garden City, NJ, Image Books.

Küng, H. (1978). *Signposts for the Future: Contemporary issues facing the Church*. Garden City, NY, Doubleday.

LaFreniere, G. F. (2007) *The Decline of Nature: Environmental History and the Western Worldview*. Bethesda, MD, Academica Press

LaHaye, T. and J. B. Jenkins (1995). *Left Behind*. Carol Stream, IL, Tyndale House.

Lane, W. L. (1974). *The Gospel according to Mark: The English text with introduction, exposition, and notes*. (NICNT) Grand Rapids, MI, W. B. Eerdmans.

Latour, B. (2009). "Will non-humans be saved? An argument in Ecotheology." *The Journal of the Royal Anthropological Institute* 15(3): 459-475.

Laureto, L. M. O., et al. (2015). "Function diversity: an overview of its history and applicability." *Natureza & Conservação* 13(2): 112-116.

Lawton, J. H., and R. M. May. (1995) *Extinction Rates*. Oxford, OUP.

Leander, H. (2013). *Discourses of Empire: the Gospel of Mark from a post-colonial perspective*. Atlanta, GA, Society of Biblical Literature.

Leopold, A. (1989). *A Sand County Almanac*. New York / Oxford, OUP.

- Leopold, A. (1993) *Round River* New York, OUP.
- LeRoy, M. (1986) "Fighting on All Fronts: Charity Versus Politics." *Third Way*, August, 1986: 21-26.
- Leske, A. M. (2002). Matthew 6.35-34: Human Anxiety and the Natural World. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski. Shfffield, Sheffield Academic Press: 15-27.
- Lewis, C. S. (2002). *The Problem of Pain*. New York, OUP.
- Lewis, J. P. (1968). *A Study of the Interretation of Noah and the Flood in the Jewish and Christian Literature*. Leiden, E J Brill.
- Limburg, J. (1991). "The responsibility of royalty: Genesis 1-11 and the care of the earth." *Word and World* 11(2): 124-130.
- Lindsey, H. (1970). *The Late Great Planet Earth*. Grand Rapids, MI, Zondervan.
- Linzey, A. (1976). *Animal Rights: A Christian Assessment*. London, SCM.
- Linzey, A. (1987). *Christianity and the Rights of Animals*. London, SPCK.
- Linzey, A. (1994). *Animal Theology*. London, SCM Press.
- Linzey, A. and D. Cohn-Sherbok (1997). *After Noah: Animals and the Liberation of Theology*. London, Bloomsbury.
- Linzey, A. and T. Regan, eds. (2007) *Animals and Christianity: A Book of Readings*. Eugene, OR, Wipf & Stock.
- Linzey, A. (2009). *Creatures of the Same God: Explorations in Animal Theology*. Brooklyn, NY, Lantern Books.
- Loader, W. (2002). Good News - for the Earth? Reflections on Mark 1.1-15. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski. Sheffield, Sheffield Academic Press: 28-43.
- Lodge, D M, and C. Hamlin, eds. (2006) *Religion and the New Ecology: Environmental Responsibility in a World in Flux*. Notre Dame, IN, University of Notre Dame Press.

- Lohfink, N. (1982). *Great themes from the Old Testament*. Edinburgh, T. & T. Clark.
- Louv, R. (2005). *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*. Chapel Hill, NC, Algonquin Books.
- Lovelock, J. and L. Margulis (1974). "Atmospheric Homeostasis by and for the Biosphere: The Gaia Hypothesis." *Tellus* Stockholm: International Meteorological Institute, 26(1-2): 2-10.
- Lovelock, J. (1994). What dangers lie ahead? *The Precautionary Principle*. T. O'Riordan and J. Cameron. London, Earthscan Publications Ltd.: 114-116.
- Lowery, R. H. (2000). *Sabbath and Jubilee*. St. Louis, Missouri, Chalice Press.
- Luther, M. (1956). *Luther's Works*. Saint Louis, Concordia.
- Mabey, R. (1986) *Gilbert White: A Biography of the Author of a Natural History of Selborne*. London: Century Hutchinson.
- Mabey, R. (1993, 2nd ed.). *The Common Ground: A Place for Nature in Britain's Future*. London, J. M. Dent.
- Macdonald, D. W. and Willis, K. J. (2013) "Elephants in the Room: Tough Choices for a Maturing Discipline." Chap. 25 In *Key Topics in Conservation Biology 2*, edited by D. W. Macdonald and K. J. Willis, Hoboken, NJ; Oxford: Wiley-Blackwell, 469-94.
- Mace, G. M., et al. (2007). Prioritizing Choices in Conservation. *Key Topics in Conservation Biology*. D. W. Macdonald and K. Service. Oxford, Blackwell.
- Mace, G. M. (2014). "Whose Conservation? Changes in the perception and goals of nature conservation require a solid scientific basis." *Science* 345 (6204): 1558-1560.
- Maier, H. O. (2002). There's a New World Coming! Reading the Apocalypse in the Shadow of the Canadian Rockies. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski (eds.). London, Sheffield University Press.

- Maier, D. S. (2013) *What's So Good About Biodiversity? A Call for Better Reasoning About Nature's Value*. The International Library of Environmental, Agricultural and Food Ethics. edited by M. Korhals. Dordrecht, Springer.
- Mangalwadi, V. and Mangalwadi R. (1993) *The Legacy of William Carey: A Model for the Transformation of a Culture*. Wheaton, IL, Crossway Books.
- Marlow, H. (2009) *Biblical Prophets and Contemporary Environmental Ethics: Re-Reading Amos, Hosea and First Isaiah*. Oxford, OUP.
- Marshall, C. D. (2002). *Crowned with Glory and Honor: Human Rights in the Biblical Tradition*. Telford, PA, Pandora Press U.S.
- Marshall, I. H., et al., (eds.) (1977). *New Bible Dictionary*. Leicester, IVP.
- Marshall, I. H., (2000). Commitment to Creation. *The Care of Creation*. R. J. Berry. Leicester, IVP.
- Marx, L. (1964) *The Machine in the Garden: Technology and the Pastoral Ideal in America*. New York, OUP.
- Matheny, G. (2006) "Utilitarianism and animals", in Singer, P. (ed.) *In defense of animals: The second wave*, Malden, Blackwell, 13-25.
- Mathews, K. A. (1995). *Genesis I-II*. Nashville, TN., Broadman & Holman Publishers.
- Matulis, B. S., (2014) "The economic valuation of nature: A question of justice?" *Ecological Economics* 104: 155-57.
- May, R. M. (2011) "Why Should We Be Concerned About Loss of Biodiversity?" *Comptes Rendus Biologies*, no. 334: 346-50.
- Mays, J. L. (1969). *Hosea*. London, SCM.
- Mays, J. L. (1994). *Psalms*. Louisville, KY, Westminster John Knox Press.
- McCall, T. D. (2011). *The Greenie's Guide to the End of the World: Ecology and Eschatology*. Adelaide, ATF Theology.

McCarthy, D. J. (1963). *Treaty and Covenant: A Study in Form in the Ancient Oriental Documents and in the Old Testament*. Analecta Biblica: 21. Rome, Pontifical Biblical Institute.

McCauley, D. J. (2006). "Selling out on Nature." *Nature* 443: 27-28.

McFarland, I. A. (2014). *From Nothing: A Theology of Creation*. Louisville, KY, Westminster John Knox Press.

McGrath, A. E. (2002). *The Reenchantment of Nature: the denial of religion, and the ecological crisis*. Garden City, NY, Doubleday.

McKeown, J. (2014). *God's Babies: Natalism and Bible Interpretation in Modern America*, Cambridge, Open Book Publishers.

McKibben, W. (1994) *The Comforting Whirlwind: God, Job and the scale of Creation*. Grand Rapids, MI, Eerdmans.

McKibben, W. (2011) *Eaarth: Making a Life on a Tough New Planet*. New York, St. Martin's Griffin.

McLaughlin, R. P. (2014). *Preservation and Protest: Theological Foundations for an Eco-Eschatalogical Ethics*. Minneapolis, MN, Fortress Press.

McShane, K. (2009). "Environmental Ethics: an overview." *Philosophy Compass* 4(3): 407-420.

Melin, A., (2009) "Towards a Theological Virtue Ethic for the Preservation of Biodiversity", in Andrianos, L., Kenanidis, K., Papaderos, A. (Eds.), *Ecological Theology and Environmental Ethics*, Crete, Orthodox Academy of Crete, 371-378

Melin, A. (2013) *Living with Other Beings: A Virtue-Oriented Approach to the Ethics of Species Protection*. Studies in Religion and the Environment. Zurich, Lit Verlag GMBH.

Middleton, R. J. (2005). *The Liberating Image: The Imago Dei in Genesis 1*. Ada, MI, Brazos Press.

Middleton, R. J. (2014). *A New Heaven and a New Earth: Reclaiming Biblical Eschatology*. Grand Rapids, MI, Baker Academic

Midgley, M. (2004). *The Myths we live by*. Abingdon, Taylor & Francis.

- Milgrom, J. (2004). *Leviticus: A Book of Ritual and Ethics*. Minneapolis, Fortress Press.
- Millennium Ecosystem Assessment. (2005) *Ecosystems and Human Well-Being: Synthesis*. Washington DC, Island Press.
- Miller, T. R., et al. (2011). "The new conservation debate: The view from practical ethics." *Biological Conservation* 144(3): 948–957.
- Moltmann, J. (1967). *Theology of Hope: On the Ground and the Implications of a Christian Eschatology*. London, SCM.
- Moltmann, J. (1973). *The Crucified God: The Cross of Christ as the Foundation and Criticism of Christian Theology*. London, SCM.
- Moltmann, J. (1975). *The Future of Creation*. London, SCM.
- Moltmann, J. (1990). *The Way of Jesus Christ: Christology in Messianic Dimensions*. London, SCM.
- Moltmann, J. (1993). *God in Creation: A New Theology of Creation and the Spirit of God*. Minneapolis, MN, Fortress Press.
- Moltmann, J. (1996). *The Coming of God: Christian Eschatology*. Minneapolis, MN, Fortress Press.
- Moltmann, J. (1997). *The Source of Life: The Holy Spirit and the Theology of Life*. Minneapolis, MN, Augsburg Fortress.
- Moltmann, J. (2015). Is God incarnate in all that is? *Incarnation: on the scope and depth of Christology*. N. H. Gregersen. Minneapolis, MN, Fortress: 119-132.
- Moo, D. J. (1996). *The NIV Application Commentary: 2 Peter, Jude*. Grand Rapids, MI, Zondervan.
- Moo, D. J. and J. Moo (2018). *Creation Care: A biblical theology of the natural world*. Grand Rapids, MI, Zondervan.
- Moo, J. (2014). New Testament Hope and a Christian Environmental Ethos. *As Long as the Earth Endures: The Bible, Creation and the Environment*. J. Moo and R. Routledge (eds.). Nottingham, Apollos: 145-168.

- Moo, J. and R. Routledge, (eds.) (2014). *As Long as the Earth Endures: The Bible, Creation and the Environment*. Nottingham, Apollos.
- Mora, C., et al. (2011) How Many Species Are There on Earth and in the Ocean? *PLoS Biol* 9.
- Moule, C. F. D. (1964). *Man and Nature in the New Testament: Some Reflections on Biblical Ecology*. London, Athlone Press.
- Mounce, R. (1977). *The New International Commentary of the New Testament: The Book of Revelation*. Grand Rapids, MI, Eerdmans.
- Muir, J. (1896). "The National Parks and Forest Reservations." *Sierra Club Bulletin*, Retrieved 2nd Jan. 2018 http://vault.sierraclub.org/john_muir_exhibit/writings/nat_parks_forests_1896.aspx.
- Muir, J. (1965) *The Story of my Boyhood and Youth*. Madison, University of Wisconsin Press
- Muir, J. (1988) *John Muir in His Own Words: A Book of Quotations*. Lafayette, CA, Great West Books.
- Muir, J. (1991). *A Thousand-Mile Walk to the Gulf*. San Francisco, Sierra Club Books.
- Muir, J. (2009) *Journeys in the Wilderness: A John Muir Reader*. Edinburgh, Birlinn.
- Myers, N., et al. (2000). "Biodiversity hotspots for conservation priorities." *Nature* 403: 853-858.
- Naess, A. (1984) "A Defence of the Deep Ecology Movement." *Environmental Ethics* 6, no. 3: 265-70.
- Nash, J. A. (2009) "The Bible vs. Biodiversity: The Case against Moral Argument from Scripture." *Journal for the Study of Religion, Nature and Culture* 3, no. 2: 213-37.
- Newbigin, L. (1990). "Come Holy Spirit, Renew the whole Creation." *Selly Oak Occasional Papers*, 6.
- Newsom, C. A. (2009) *The Book of Job: A Contest of Moral Imaginations*. New York, OUP.
- Nicholson, E. W. (1986). *God and his People: Covenant and Theology in the Old Testament*. Oxford, Clarendon.

- Nicholson, E. W. (1995). The Limits of Theodicy as a Theme in the Book of Job. *Wisdom in Ancient Israel: Essays in Honour of J. A. Emerton*. J. Day, R. P. Gordon and H. G. M. Williamson (eds.). Cambridge, CUP: 71-82.
- Nolland, J. (1989-1993). *Word Biblical Commentary: Luke (Vols. 35A-C)*. Nashville, TN, Thomas Nelson.
- Nolland, J. (2005). *The Gospel of Matthew*. (NIGTC) Grand Rapids, MI, W. B. Eerdmans.
- Northcott, M. S. (2009). "Loving Scripture and Nature." *Journal for the Study of Religion, Nature and Culture* 3:2, 247-253.
- Northcott, M. S. (2013), *A Political Theology of Climate Change*. Grand Rapids, MI, Eerdmans.
- Norton, B. G. (1984), "Environmental Ethics and Weak Anthropocentrism." *Environmental Ethics* 6, no. 2: 131-48.
- Norton, B. G. (2003) *Searching for Sustainability: Interdisciplinary Essays in the Philosophy of Conservation Biology*. Cambridge, CUP.
- Noss, R. and Cooperrider, A.R. (1994) *Saving Nature's Legacy*. Island Press.
- Noth, M. (1958). *The History of Israel*. London, A & C Black.
- Novak, D. (1996). Religious human rights in the Judaic tradition. *Religious Human Rights in Global Perspective*. J. J. Witte and J. D. van der Vyer. Leiden, Martinus Nijhoff Publishers.
- O'Brien, P. T. (1987). *Word Biblical Commentary 44: Colossians, Philemon*. Milton Keynes, Word (UK).
- O'Connor, E. (2011). *Gau Island Feral Pig Workshop and Follow-up Report*. Suva, Fiji, Nature Fiji - Marqueti Viti.
- O'Connor, K. M. (2003). Wild, Raging Creativity: The Scene in the Whirlwind (Job 38-41). *A God So Near: Essays on Old Testament Theology in Honor of Patrick D. Miller*. B. A. Strawn and N. R. Bowen. Winona Lake, IN, Eisenbrauns: 171-179.

O'Donovan, O. (1986). *Resurrection and Moral Order: An Outline for Evangelical Ethics*. Leicester, IVP.

Oelschlaeger, M. (1991). *The Idea of Wilderness*. New Haven, CT, Yale University Press.

Ogutu-Ohwayo, R. (1990). "The decline of the native fishes of Lakes Victoria and Kyoga (East Africa) and the impact of introduced species, especially the Nile perch, *Lates niloticus*, and the Nile tilapia, *Oreochromis niloticus*." *Environmental Biology of Fishes* 27: 81-89.

Ophuls, W. (1997). *Requiem for Modern Politics: The Tragedy of the Enlightenment and the challenge of the new Millennium*. Boulder, CO, Westview Press.

Origen. (1953) *Contra Celsum*. Cambridge, CUP.

Orr, D. W. (2005) "Armageddon Versus Extinction." *Conservation Biology* 19: 290-92.

Osborne, W. R. (2012). "Nature Language in Isaiah 1-39 and Its Implications for Environmental Ethics: Interacting with Hilary Marlow's Biblical Prophets and Contemporary Environmental Ethics." *McMaster Journal of Theology and Ministry* (14): 59-71.

Oswalt, J. N. (1987). "Canonical Criticism: A Review From A Conservative Viewpoint." *Journal of the Evangelical Theological Society* 30(3): 317-325.

The Oxford English Dictionary (1989). J. A. Simpson and E. S. C. Weiner (eds.), Oxford, Clarendon Press.

Pachauri, R. K., and A Reisinger. (2008) *Climate Change 2007: Synthesis Report*. Geneva, Switzerland, IPCC.

Palmer, C. (2006). Stewardship: A Case Study in Environmental Ethics. *Environmental Stewardship*. R. J. Berry. London, T. & T. Clark: 63-75.

Pannenberg, W. (1994). *Systematic Theology, Volume 2*. Grand Rapids, MI, Eerdmans.

Pao, D. W. and E. J. Schnabel (2007). Luke. *Commentary on the New Testament use of the Old Testament*. G. K. Beale and D. A. Carson. Grand Rapids, MI, Baker Academic: 251-414.

Passmore, J. (1974). *Man's Responsibility for Nature*. New York, Charles Scribner's Sons.

- Peacocke, A. R. (1979) *Creation and the World of Science*. Oxford, Clarendon Press.
- Pearson, R. G. (2016). "Reasons to Conserve Nature." *Trends in Ecology and Evolution* 31(5): 366-371.
- Pedersen, J. (1946). *Israel: Its life and culture*. London, Geoffrey Cumberlege.
- Pepper, D. (1984) *The Roots of Modern Environmentalism*. London, Croom Helm.
- Perdue, L. G. (1986) "Job's Assault on Creation." In *Biblical and Other Studies: Tenth Anniversary Volume*, edited by Ahroni, R. HAR. Columbus, OH: Ohio State University, 1986
- Perdue, L. G. (2005) *Reconstructing Old Testament Theology: After the Collapse of History*. Minneapolis, MN: Fortress Press.
- Pereira, G. C. (2015). "An Evaluation of the Canonical Approach: Is it adequate for the task of Old Testament theology in Christian hermeneutic endeavour?" *Scriptura* 114: 1-12.
- Perry, D. and G. Perry (2008). "Improving interactions among animal rights groups and conservation biologists." *Conservation Biology* 22(4): 27-35.
- Peters, T. (1993). *God as Trinity: Relationality and Temporality in Divine Life*. Louisville, KY, John Knox.
- Pidcock-Lester, K. (2000) "'Earth Has no Sorrow that Earth Cannot Heal': Job 38-41." In *God Who Creates*, edited by Brown, W. P. et al. Grand Rapids, MI, Eerdmans, 125-32.
- Pimm, S. L. et al. (2014) "The Biodiversity of Species and Their Rates of Extinction, Distribution and Protection." *Science* 344, no. 6187: 987.
- Plato (2007). *The Republic*. London, Penguin Classics.
- Polkinghorne, J. C. and M. Welker, Eds. (2000). *The End of the World and the Ends of God: Science and Theology on Eschatology*. Harrisburg PA, Trinity Press International.
- Potschin, M., et al., (eds.) (2016). *Routledge Handbook of Ecosystem Services*. Abingdon, Routledge.

Prance, G. T. (2002). *Preserving Biodiversity: Is there a Biblical Reason?* Christians in Science / St. Edmund's Lecture. Cambridge.

Preece, R. and L. Chamberlain (1993). *Animal Welfare and Human Values*. Waterloo, Ontario, Wilfrid Laurier University Press.

Preece, R. (2002). *Awe for the Tiger, Love for the Lamb: A Chronicle of Sensibility to Animals*. Vancouver, UBC Press.

Race, A. (1983). *Christians and Religious Pluralism: Patterns in the Christian theology of religions*. London, SCM.

Rae, M. (2008). The Testimony of Works in the Christology of John's Gospel. *The Gospel of John and Christian Theology*. R. Bauckham and C. Mosser. Grand Rapids, MI, Eerdmans: 295-310.

Rahner, H. (1972). *Man at Play: or did you ever practice Eutrapelia?* New York, Herder & Herder.

Räisänen, H. (2000). *Beyond New Testament Theology*. London, SCM.

Ray, J. (1717 edition). *The Wisdom of God Manifested in the Works of Creation*. London, William Innys.

Redford, K. H., and W. M. Adams. (2009) "Payment for Ecosystem Services and the Challenge of Saving Nature." *Conservation Biology* 23, no. 4: 785-87.

Reeves, J. (2013). "Problems for Postfoundationalists: Evaluating J. Wentzel van Huyssteen's Interdisciplinary Theory of Rationality." *The Journal of Religion* 93 (2): 131-150.

Regan, T. (1983). *The case for Animal Rights*. Berkeley, CA, University of California Press.

Regan, T. (2001). *Defending Animal Rights*. Urbana & Chicago, Illinois University Press.

Rendtorff, R. (1986) *The Old Testament: An Introduction*. Minneapolis, MN, Fortress Press.

Reynolds, M., et al., Eds. (2009). *The Environmental Responsibility Reader*. London / New York, Zed Books.

Ricoeur, P. (1970). *Freud and Philosophy: an essay on interpretation*. New Haven, CT, Yale University Press.

- Rietkerk, W. (1989). *The Future Great Planet Earth*. Mussorie, India, Good Books.
- Robb, C. S. (2009). "Biblical Authority to Advocate for Biodiversity: A Response to James A. Nash." *Journal for the Study of Religion, Nature and Culture* 3:2, 238-246.
- Rockström, Johan, et al. (2009) "A Safe Operating Space for Humanity." *Nature* 461: 472-75.
- Rodd, C. S. (2001). *Glimpses of a Strange Land: Studies in Old Testament Ethics*. Edinburgh, T. & T. Clark.
- Roehrs, W. R. (1965). "The Creation Account of Genesis: Guidelines for an Interpretation." *Concordia Theological Monthly* 36: 301-321.
- Rogerson, J. W. (2010). The Creation Stories: Their Ecological Potential and Problems. *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. D. G. Horrell, C. Hunt, C. Southgate and F. Stavrakopoulou. London, T. & T. Clark: 21-31.
- Rolston III, H. I.. (1986) *Philosophy Gone Wild: Essays in Environmental Ethics*. Amherst, NY, Prometheus.
- Rolston III, H. I. (1995). Duties to Endangered Species. *Environmental Ethics*. R. Elliot. Oxford, OUP: 60-75.
- Rolston III, H. I. (2015). Divine Presence - Causal, Cybernetic, Caring, Cruciform: From Information to Incarnation. *Incarnation: On the Scope and Depth of Christology*. N. H. Gregersen. Minneapolis, MA, Fortress Press.
- Ross, A. P. (2000). *Creation and Blessing: a guide to the study and exposition of Genesis*. Grand Rapids, MI., Baker Books.
- Rossing, B. (2002). Alas for Earth! Lament and Resistance in Revelation 12. *The Earth Story in the New Testament*. N. C. Habel and V. Balabanski (eds.) London, Sheffield University Press.
- RSPCA. (1972) *"The History of the RSPCA."* London: RSPCA. Retrieved 2nd Jan. 2018 from <https://www.animallaw.info/article/history-rspca>.

Ruddiman, W. F. (2005) *Plows, Plagues and Petroleum: How Humans Took Control of Climate*. Princeton, NJ, Princeton University Press.

Ruether, R. R. (1972). *Liberation Theology: Human hope confronts American history and human power*. Mahwah, NJ, Paulist Press.

Ruscillo, L. (2007). "The primacy of Christ and wisdom literature." *Faith*, 39:1, 8-14.

Sacks, J. (2009). *Covenant and Conservation, Genesis: The book of beginnings*. Jerusalem / London, Maggid Books.

Sacks, J. (2012). *The Great Partnership: God, science and the search for meaning*. London, Hodder & Stoughton.

Sagoff, M. (1997) "Can We Put a Price on Nature's Services?" *Philosophy and Public Policy* 17, no. 3: 7-12.

Sailhamer, J. H. (1992). *The Pentateuch as Narrative: A Biblical-Theological Commentary*. Grand Rapids, MI., Zondervan.

Sampson, P. (2009) "Lord of Creation or Animal among Animals: Darwinism, Dominion and Duties Towards Beasts." Retrieved 2nd Jan. 2018 from https://www.academia.edu/2524744/Lord_of_creation_or_animal_among_animals.

Sandel, M. J. (2012). *What Money can't buy: The moral limits of markets*. New York, Farrar, Straus and Giroux.

Sandler, R. and P. Cafaro (2005). *Environmental Virtue Ethics*. Lanham, MD, Rowman & Littlefield Publishers.

Sandler, R.. (2012) "Intrinsic Value, Ecology and Conservation." *Nature Education Knowledge* 3, 10

Santmire, H. P. (1985) *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology*. Minneapolis, MN, Fortress Press.

Sarkar, S. (1999) "Wilderness Preservation and Biodiversity Conservation: Keeping Divergent Goals Distinct." *BioScience* 49, no. 5: 405-12.

- Sarkar, S. (2005) *Biodiversity and environmental philosophy: An introduction*. Cambridge, CUP.
- Scheuering, R. W. (2004). *Shapers of the Great Debate on Conservation: A Biographical Dictionary*. Westport, CT, Greenwood Press.
- Schifferdecker, K. (2008) *Out of the Whirlwind: Creation Theology in the Book of Job*. Cambridge, MA: HUP.
- Schmid, H. H. (1984). 'Creation, Righteousness, and Salvation: 'Creation Theology' as the Broad Horizon of Biblical Theology'. *Creation in the Old Testament*. B. W. Anderson. Philadelphia, PA, Fortress.
- Scholnick, S. H. (1987) "Poetry in the Courtroom: Job 38-41." In *Directions in Biblical Hebrew Poetry*, edited by Follis, E. R. Sheffield: JSOT Press, 185-204.
- Schochet, E. J. (1984). *Animal Life in Jewish Traditions: Attitudes and Relationships*. New York, Ktav Publishing House Inc.
- Scofield, C. I. (1909). *The Holy Bible: The Scofield Study Bible*. New York, NY, Oxford University Press.
- Schröter, M., et al. (2014). "Ecosystem Services as a Contested Concept: a Synthesis of Critique and Counter-Arguments." *Conservation Letters* 7: 514–523.
- Schumacher, E. F. (1973) *Small is Beautiful: A Study of Economics As If People Mattered*. London, Blond & Briggs.
- SDC / WWF-UK. (2005) "Sustainable Development and UK Faith Groups: Two Sides of the Same Coin?". London: SDC.
- Sheil, D., et al. (2016). "The Moral Basis for Conservation: Reflections on Dickman et al." *Frontiers in Ecology and the Environment* 14(2): 67-70.
- Shellenberger, M., and T. Nordhaus. (2004) *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World*. Retrieved 2nd Jan. 2018 from https://www.thebreakthrough.org/images/Death_of_Environmentalism.pdf.

Sierra Club (2008). *Faith in Action: Communities of Faith Bringing Hope for the Planet*. Oakland, CA, Sierra Club: 36.

Silvertown, J. (2015). "Have Ecosystem Services been Oversold?" *Trends in Ecology and Evolution* 30(11): 641-648.

Sim, D. (1993). "The Meaning of Palingenesia in Matthew 19:28." *Journal for the Study of the New Testament* 50: 3-12.

Simberloff, D. (1995). "Why do introduced species appear to devastate islands more than mainland areas?" *Pacific Science* 49(1): 87-97.

Simberloff, D. (1998). "Flagships, Umbrellas, and Keystones: Is Single-Species Management Passé in the Landscape Era?" *Biological Conservation* 83: 247-257.

Singer, P. (1979). Not for Humans Only: The Place of Nonhumans in Environmental Issues. *Ethics and Problems of the 21st Century*. K. E. Goodpastor and K. M. Syre (eds.). Notre Dame, University of Notre Dame Press: 191-206.

Singer, P. (1995). *Animal Liberation*. London, Pimlico.

Singer, P. (2010). All Animals are Equal. *Environmental Ethics: The big questions*. D. R. Keller. Oxford, Blackwell: 169-175.

Singer, P. (2011 [1979]) *Practical ethics, 3rd ed.*, Cambridge, Cambridge University Press.

Sittler, J. (1970). "Ecological Commitment as Theological Responsibility." *Zygon* 5: 172-181.

Sittler, J. (1972). "The Scope of Christological Reflection." *Interpretation* 26(3): 328-337.

Smith, M. J., ed. (1999) *Thinking through the Environment: A Reader*. London / New York, Routledge.

Snyder, H. and J. Scandrett (2011). *Salvation Means Creation Healed: The Ecology of Sin and Grace*. Eugene, OR, Cascade Books.

Soulé, M.E. (1985) "What is conservation biology?" *Bioscience* 35, 727–734

Soulé , M. E. and B. A. Wilcox eds. (1980). *Conservation Biology: An Evolutionary-Ecological Perspective*. Sinauer, Sunderland.

Southgate, C. (2008). *The Groaning of Creation: God, Evolution, and the Problem of Evil*. Louisville, KY, Westminster John Knox Press.

Spade, A. and P. Strindlund (2012). Doesn't Jesus treat animals as property? *A Faith Embracing all Creatures: addressing commonly asked questions about Christian care for animals*. T. York and A. Alexis-Baker. Eugene, OR, Cascade Books.

Spash, C. (2009) "The New Environmental Pragmatists, Pluralism and Sustainability," *Environmental Values* 18: 253-56.

Spash, C. (2011). "Terrible Economics, Ecosystems and Banking." *Environmental Values* 20: 141-145.

Spash, C. (2015). "Bulldozing biodiversity: The economics of offsets and trading in nature." *Biological Conservation* 192: 541-551.

Steffen, W., et al. (2011a). "The Anthropocene: conceptual and historical perspectives." *Philosophical Transactions of the Royal Society A*(369): 842-867.

Steffen, W., et al. (2011b). "The Anthropocene: From Global Change to Planetary Stewardship." *Ambio* 40(7): 739-761.

Steffen, W., et al. (2015). "Planetary boundaries: Guiding human development on a changing planet." *Science* 347(6223).

Stiver, D. R. (2001) *Theology after Ricoeur: New Directions in Hermeneutical Theology*. Louisville, KY, Westminster John Knox Press.

Storer, T. I. (1946). "DDT and Wildlife." *The Journal of Wildlife Management* 10(3): 181-183.

Strong, M. (1996). *A New 'Rich-Poor' War*. Korea Institute for International Economic Policy, Seoul.

Sukhdev, P. et al. (2008) *The Economics of Ecosystems and Biodiversity: An Interim Report*. European Communities / TEEB.

Sukhdev, P. (2010) "Greening Economies", *Our Planet*, 18-19.

- Sutherland, W. J. ed. (1998) *Conservation Science and Action*. Oxford, Blackwell.
- Sweet, J. (1979). *Revelation*. London, SCM.
- Tallis, H., et al. (2014). "A call for inclusive conservation." *Nature* 515: 27-28.
- Taylor, C. (2007). *A Secular Age*, Cambridge, MA, Harvard University Press.
- Taylor, P. (1986) *Respect for Nature: A Theory of Environmental Ethics*. Princeton, NJ, Princeton University Press.
- TEEB (2010). *The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB*, UNEP.
- Teilhard de Chardin, P. (1959). *The Phenomenon of Man*. New York, Harper & Bros.
- Temple, W. (1947). *Readings in St. John's Gospel*. London, MacMillan.
- Terrien, S. (1990) "Job as a Sage." In *The Sage in Israel and the Ancient Near East*, edited by Gammie, J. G. and L. G. Perdue. Winona Lake, IN: Eisenbrauns, 1990, 231-42.
- Thomas, K. (1983). *Man and the Natural World: Changing Attitudes in England 1500-1800*. London, Allen Lane.
- Thompson, R. and B. M. Starzomski (2007) "What Does Biodiversity Actually Do? A Review for Managers and Policy Makers." *Biodiversity and Conservation* 16: 1359-78.
- Tilman, D. (2001). Functional Diversity. *Encyclopedia of Biodiversity, Volume 3*. S. A. Levin. Minnesota, Academic Press: 109-120.
- Tracy, D. (1981) *The Analogical Imagination*. London, SCM.
- Tracy, D. (1982) "Religious Values after the Holocaust: A Catholic View." In *Jews and Christians after the Holocaust*, edited by A. J. Peck. Philadelphia, Fortress Press.
- Tracy, D. (1990) "God, Dialogue and Solidarity: A Theologian's Refrain." *The Christian Century*: 901-904.

- Trepp, L. (1982). *Judaism: Development and Life*. Belmont, CA, Wadsworth.
- Turner, L. A. (1993). "The Rainbow as the Sign of the Covenant in Genesis IX:11-13." *Vitus Testamentum* 43:1, 119-124.
- United Nations (1992). *Convention on Biological Diversity*. Rio de Janeiro, United Nations: 28.
- Van Dyke, F. (2010). *Between Heaven and Earth: Christian Perspectives on Environmental Protection*. Santa Barbara, CA, Praeger.
- van Huyssteen, J. W. (1993). "Theology and Science: The Quest for a New Apologetics." *HTS Theologiese Studies / Theological Studies* 49(3): 425-444.
- van Huyssteen, J. W. (2006). *Alone in the World? Human uniqueness in science and theology*. Grand Rapids, MI, Eerdmans.
- van Huyssteen, J. W. (2014). "Postfoundationalism in Theology: The structure of theological solutions." *Ephemerides Theologicae Lovanienses* 90 (2): 209-229.
- Van Leeuwen, R. (2005). "Why do the Seraphim sing, "The Fulness of all the Earth is His glory"? (Isaiah 6:3)." *Covenant Quarterly* 62 (1): 3-21.
- Vantassel, S. M. (2009). *Dominion over Wildlife? An Environmental Theology of Human-Wildlife Relations*. Oregon, Resource Publications.
- Venkatachalam, L. (2004) "The Contingent Valuation Method: A Review." *Environmental Impact Assessment Review* 24: 89-124.
- Veuthey, Sandra, and Julien-Francois Gerber. (2011) "Valuation Contests over the Commoditisation of the Moabi Tree in South-Eastern Cameroon." *Environmental Values* 20: 239-64.
- Vine, W. E., (ed.) (1981). *Expository Dictionary of Bible Words*. Basingstoke, Hants, Marshall, Morgan & Scott.
- Vitousek, P. M. et al. (1997a) "Human Domination of Earth's Ecosystems." *Science* 277, no. 5325.

Vitousek, P. M., et al. (1997b). "Introduced species: a significant component in human-caused global change." *New Zealand Journal of Ecology* 21(1): 1-16.

von Rad, G. (1966). *The Problem of the Hexateuch and Other Essays*. London, SCM.

von Waldow, H. E. (1974). Israel and her Land: Some Theological Considerations. *A Light Unto my Path: Old Testament Studies in Honor of Jacob M. Myers*. H. N. Bream, R. D. Heim and C. A. Moore (eds.). Philadelphia, PA, Temple University Press: 493-508.

Walker, W. O. (1982). "The Lord's Prayer in Matthew and John." *New Testament Studies* 28(2): 237-256.

Walsh, B. J. and S. C. Keesmat (2005). *Colossians Re:Mixed: subverting the Empire*. Milton Keynes, Paternoster.

Waltke, B. K. and C. J. Fredricks (2012). *Genesis: a commentary*. Grand Rapids, MI., Zondervan.

Walton, J. H. (2001). *Genesis*. Grand Rapids, MI., Zondervan.

Walvoord, J. (1966). *The Resurrection of Jesus Christ*. Chicago, IL, Moody Press.

Walvoord, J. (1970). "Realized Eschatology." *Bibliotheca Sacra* 127(508): 313-323.

Watson, F. (2010). In the Beginning: Irenaeus, Creation and the Environment. *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. D. G. Horrell, C. Hunt, C. Southgate and F. Stavropoulou. London, T. & T. Clark: 127-139.

Watts, I. (1719) *The Psalms of David: Imitated in the language of the New Testament and applied to the Christian state and worship*. London, J. Clark.

Watts, I. (1866) *Divine and Moral Songs for Children*. New York, Hurd & Houghton.

Weiser, A. (1949). *Das Buch der Zwölf kleiner Propheten I: Die Propheten Hosea, Joel, Amos, Obadja, Jona, Micha*. Göttingen, Vandenhoeck & Ruprecht.

Welker, M. (1999). *Creation and Reality*. Minneapolis, MN, Augsburg Fortress.

Wells, S. (2004) *Improvisation: The Drama of Christian Ethics*. London, SPCK.

- Wenham, G. J. (1987). *Genesis*. Waco, TX, Word Books.
- Wesley, J. (1872) *The Sermons of John Wesley*. Nampa, Idaho: Wesley Center Online, Northwest Nazarene University. Retrieved 2nd Jan. 2018 from <http://wesley.nnu.edu/john-wesley/the-sermons-of-john-wesley-1872-edition>.
- Westermann, C. (1988). *Genesis*. London, T. & T. Clark.
- Westermann, C. (1992). Peace (Shalom) in the Old Testament. *The Meaning of Peace: Biblical Studies*. P. B. Yoder and W. M. Swartley. Louisville, KY, Westminster John Knox: 16-48.
- White Jr., L. (1967) "The Historical Roots of Our Ecologic Crisis." *Science* 155, no. 3767: 1203-1207.
- Wilcock, M. (1975). *The Message of Revelation: I Saw Heaven Opened*. Leicester, IVP.
- Williamson, P. (2014). Destruction or Transformation? Earth's Future in Biblical Perspective, in *As Long as the Earth Endures: The Bible, Creation and the Environment*. J. Moo and R. Routledge. Nottingham, Apollos.
- Wilson, E. O. (1984). *Biophilia*. Cambridge, MA, HUP.
- Wilson, E. O. and F. M. Peter, eds. (1988) *Biodiversity*. Washington DC, National Academy Press.
- Wilson, E. O. (2006). *The Creation: An Appeal to Save Life on Earth*. New York / London, W W Norton.
- Wilson, E. O. (2016). *Half-Earth: Our planet's fight for life*. New York / London, Liveright.
- Wilson, M. R. (1989). *Our Father Abraham: Jewish Roots of the Christian Faith*, Eerdmans.
- Wirzba, N., (ed.) (2002). *The Art of the Commonplace: The Agrarian Essays of Wendell Berry*. Washington DC, Conterpoint.
- Wirzba, N. (2003). *The Paradise of God - Renewing Religion in an Ecological Age*. Oxford, OUP.
- Witherington III, B. (2016). *Letters and Homilies for Hellenized Christians: A Socio-Rhetorical Commentary on 1-2 Peter*. Downers Grove, IL, IVP Academic.

- Wolff, H. W. (1974). *Hosea*. Minneapolis, MN, Augsburg Fortress.
- Wolter, M. (2016-2017). *The Gospel According to Luke (Vol. 1 & 2)*. Waco, TX, Baylor University Press.
- World Bank (2006). *Faiths and the Environment: World Bank Support 2000-05* Washington DC, The World Bank.
- Worster, D. (1994) *Nature's Economy: A History of Ecological Ideas*. Cambridge, CUP.
- Wright, C. J. H. (1984). *Living as the People of God: The Relevant of Old Testament Ethics*. Leicester, IVP.
- Wright, C. J. H. (1990). *God's People in God's Land: Family, Land, and Property in the Old Testament*. Grand Rapids, MI, Eerdmans.
- Wright, C. J. H. (2004). *Old Testament Ethics for the People of God*. Leicester, IVP.
- Wright, G. E. (1952). *God who Acts: Biblical Theology as Recital*. London, SCM.
- Wright, N. T. (1991). "How can the Bible be Authoritative?" *Vox Evangelica* 21: 7-32.
- Wright, N. T. (1992). *The New Testament and the People of God*. Minneapolis, MI, Fortress Press.
- Wright, N. T. (1999a). *The Myth of the Millennium*. London, SPCK.
- Wright, N. T. (1999b). *New Heavens, New Earth: The Biblical Picture of Christian Hope*. Cambridge, Grove Publishing.
- Wright, N. T. (2002). *John for Everyone Part 2*. London, SPCK.
- Wright, N. T. (2003). *The Resurrection of the Son of God*. London, SPCK.
- Wright, N. T. (2007). *Surprised by Hope*. London, SPCK.
- WWF/ARC (2005). *Beyond Belief: Linking Faiths and Protected Areas to Support Biodiversity Conservation*. London, WWF.

WWF (2014). *Living Planet Report 2014*. Gland, Switzerland, WWF International.

WWF (2016). *Living Planet Report 2016: risk and resilience in a new era*. Gland, Switzerland, WWF International.

Wytsma, K. (2013). *Pursuing Justice*. Nashville, TN, Thomas Nelson.

York, T. and A. Alexis-Baker, (eds.) (2012). *A Faith Embracing all Creatures: addressing commonly asked questions about Christian care for animals*. The Peaceable Kingdom. Eugene, OR, Cascade Books.

Young, F. (2013). *God's Presence: A contemporary recapitulation of early Christianity*. Cambridge, CUP.

Zimmerli, W. (1976). The place and limit of Wisdom in the framework of the Old Testament theology. *Studies in ancient Israelite wisdom*. W. Zimmerli and J. Crenshaw. New York, Ktav: 314-326.

Zimmerman, M. J. (2001). *The Nature of Intrinsic Value*. Lanham, MD, Rowman & Littlefield.

Zalasiewicz, J. , and W. Williams. (2008) "Are We Now Living in the Anthropocene?". *Geological Society of America Today* 18, no. 2: 4-8.

ZSL (2007). "EDGE - Evolutionarily Distinct and Globally Endangered." Retrieved 2nd Jan. 2018, from <http://edgeofexistence.org/index.php>.

ZSL. (2016), "Animals on the EDGE." Retrieved 2nd Jan. 2018, from <https://www.zsl.org/conservation/conservation-initiatives/animals-on-the-edge>.